# 2022 Restoring Wetlands of the Chesapeake Bay Watershed Workshop

**AUGUST 2-3, 2022, 10:00 A.M. – 3:30 P.M. ET**

## MEETING MINUTES

**CONTENTS:**



## DAY 1 – AUGUST 2ND, 2022

**LINK TO PRESENTATIONS AND MEETING MATERIALS**

**10:00 – WELCOME & OPENING COMMENTS –** *Dave Davis, Director of the Office of Wetlands & Stream Protection, Virginia Department of Environmental Quality*

- List of Day 1 attendees included in **Appendix A**
- Attendee introductions were recorded via the following Menti question, and responses can be found in **Appendix C**
    - *Do you associate with a federal government agency, a state or jurisdiction, a non-government organization, or other?*
- **Purpose of the Workshop:** *Bring together key people to identify actions to overcome the barriers of implementing nontidal and tidal wetland restoration and accelerate progress towards the Wetlands Outcome identified in the 2014 Chesapeake Bay Watershed Agreement.*
- **Workshop Outcomes:**
    1. **Understanding of the Barriers**
    2. **Identification of Approaches**
    3. **Development of an Action Plan**
- **Workshop is divided into four sessions:**
    - **SESSION 1**: Where have we been and what have we achieved?
    - **SESSION 2**: Where do we want to go?
    - **SESSION 3**: Access to funding
    - **SESSION 4**: Developing the Action Plan

### SESSION 1: WHERE HAVE WE BEEN?

**10:15 – CHESAPEAKE WETLANDS OVERVIEW:**

- **2025 WETLANDS OUTCOME & STATUS** – *Chris Guy, U.S. Fish & Wildlife Service*

- CBP Wetlands Outcome: 85,000 acres of tidal and non-tidal wetlands created/reestablished and 150,000 acres enhanced by 2025
- Presently, the Wetland Workgroup is far off the goal to achieve the 2025 outcome
- This workshop stemmed from a request by the Management Board in August 2021
- An evaluation of the Watershed Implementation Plan (WIPs) wetland commitments by jurisdiction shows that even if commitments were achieved, the outcome still would not have been attained
- Based on the WIPs: 41,350 acres still need to be created/restored and 110,180 acres still need to be enhanced

- **TIDAL WETLANDS: PAST TO FUTURE** – *Pam Mason, Virginia Institute of Marine Science*
  - **Historic:** loss of tidal wetlands largely due to development
  - **Current and future**: tidal wetlands losses can be attributed to sea level rise
  - VA Coastal Resilience Master Plan projects 86% loss by 2080
  - **Tidal Wetland Restoration Now:** limited funding; small projects are mostly focused on living shorelines; priority on non-tidal wetlands; little government involvement (mostly NGO)
  - **Needs Moving Forward**: significant and equitable funding for tidal marshes, greater governance leadership and collaboration, and more capacity.
- **WATERSHED (NON-TIDAL) WETLANDS: PAST TO FUTURE** – *Bill Jenkins, Environmental Protection Agency*
  - Decline in wetland acreage has continued despite establishment of outcomes and commitments
  - **Opportunity:** increase funding for creation, restoration, and enhancement
  - **Challenge:** adequate public and private-sector workforce "capacity" to do on the ground implementation
  - **Need:** capacity for outreach; accessing and managing funds; project management, design, and implementation; and monitoring
  - **QUESTIONS/COMMENTS:**
    - **Matt Robinson**: Is it possible to start counting living shoreline projects as wetland restoration projects as well?
      - **Carin Bisland**: Wetland living shoreline projects can be counted, but my understanding is that we are reporting them in linear feet rather than acres, so we would need to improve our data collection to gather the info on acres. We would also have to be careful that we don't double count for water quality.
- **HISTORY OF FUNDING EFFORTS TO DATE: WETLAND RESTORATION INCENTIVES IN THE CHESAPEAKE BAY** – *Stephanie Dalke, Environmental Finance Center*
  - Methods and boundaries:
    - **Timeframe**: FY2016-FY2020
    - **Primary focus**: incentive programs for wetland and floodplain restoration on private land
    - **Data collection**: mainly through direct communications
  - Incentive programs of interest:
    - **Federal:** Farm Bill (USDA); USFWS Partners for Fish & Wildlife; EPA via NFWF
    - **State:** Match for CREP; Grant Programs
  - Farm Bill: Examined obvious practices that included wetlands but excluded practices that are not as directly related to wetlands
  - Gaps and Limitations:
    - **Data gaps:** in NY/ Upper Susquehanna; in DE state match for CREP

- **Other factors that are hard to track for Farm Bill:** ease of participation; ability to keep things going through all the steps in the process; needs energy and support sustained through entire project
- **Messy details of projects:** year awarded/obligated vs. year completed; acreage enrolled vs. restored; practice count vs. project count

- Federal Incentives + NFWF: ~$25 million funding wetlands projects
- CRP and CREP:
  - Across five states included from 2016-2022 (only federal funding)
  - Not included is the state cost share/matching
  - ~2000 acres in program, total funding ~$1.3 million
- Comparison with some federal spending: **~1.6% of USDA + FWS Chesapeake Bay spending goes to wetlands**
- Not much restoration occurs through EQIP - it occurs mainly through NRCS/ACEP-WRE
- Biggest state program funders:
  - **MD:** Trust Fund
  - **PA:** Growing Greener
  - **VA:** DCR
  - **DE:** DNREC (319 and federal $)
  - **NY:** DEC or Dept. of Agriculture
- **KEY FINDINGS:**
  - Capacity is a large issue; need people to administer programs, provide outreach and technical support
    - Need staff on the ground to help navigate programs
  - Relationships with landowners are key to voluntary habitat restoration
  - Practice and project types emphasized for Bay restoration
    - Much focus on agriculture BMPs (easier sell than taking land out of production for wetlands)
    - Riparian buffers- more attention lately
    - Build wetlands into stream/floodplain restoration projects
  - Reality check- lost a lot of wetlands and restoring will take effort and energy
- **QUESTIONS/COMMENTS:**
  - **Peter Gibbs**: I wonder if the Emergency Watershed Protection Program (EWPP) Floodplain Easement (FPE) should be added to the list. It might be a very small part of the puzzle, but FPE has the potential to include restoration, wetland/floodplain as well as tidal marshes. It's driven by natural disasters but can result in restoration.
    - **Stephanie P. Dalke**: Sounds appropriate to include. No one we spoke with at state NRCS offices suggested them as a practice we should be accounting for. I wonder if there are not many happening on the ground. Do you have a sense for how many of those projects are out there in the Chesapeake Bay watershed?
  - **Kevin Du Bois**: Would the FEMA Building Resilient Infrastructure and Communities (BRIC) program also potentially be tapped for funding?
    - **Pamela Mason**: From what we have heard in VA, BRIC can be used for wetlands - especially tidal. But it is one of the nature-based solutions funds and wetlands are just one eligible projects type.

        - **ACTION: Justin Markey will send Chris Guy all their NAWCA project numbers.**
- **WETLAND RESTORATION: BARRIERS & OPPORTUNITIES IN THE CHESAPEAKE BAY** – *Amy Jacobs, The Nature Conservancy*
    - **There is interest from private landowners in restoration:** Based on 2 independent surveys of 786 landowners from PA, MD, and DE, a 50-60% of landowners would be likely to perform restoration on their property. Most landowners had never been contacted about restoration opportunities
    - Highest motivations to restore wetlands were opportunities to see wildlife, improved water quality, and improved hunting.
    - **Barriers to accelerating wetland restoration:** Based on interviews with over 70 stakeholders in 2015 involved in wetland restoration across MD, VA, PA, DE: limited funding; outreach is limited; programmatic or institutional; permitting; limited approaches to restoring wetlands
    - **This workshop is focused on:** funding capacity; leadership commitment
    - **Funding Barrier:**
        - Solutions:
            - Focus funding on priority areas
            - Secure sustained funding for all phases of restoration
            - Advocate for increased program funding
            - Develop program with local conservation groups to offer restoration options; give alternative funding opportunities to landowners
        - Recent Progress:
            - Expert panel incorporated landscape position into efficiency calculations demonstrating importance of placement
            - Project demonstrating value of working with multiple programs to engage multiple landowners in a large restoration project.
    - **Capacity/Outreach Barrier:**
        - Solutions:
            - Designate local leader for outreach and coordination
            - Host cross-training for wetland practitioners
            - Develop marketing strategies
            - Invest in market research to understand incentives
    - Recent Progress:
        - **WETLANDS WORKGROUP WEBSITE FOR CHESAPEAKE BAY** (wetlandswork.org): this website was developed to help private landowners in the Chesapeake Bay Watershed independently access information on wetland programs and providers. There is still a need for direct engagement to lead them to this website
        - **DELMARVA WETLAND PARTNERSHIP** demonstrates an approach on how to directly engage with landowners. Have had to pause doing outreach because there is too much demand to get projects on the ground
    - **THEORY OF CHANGE:** Leadership → Understand landowner concerns to increase engagement → Access more funding → Add capacity → Accelerating Implementation!
    - **QUESTIONS/COMMENTS:**
        - **Kevin Du Bois**: I would argue that drought and SLR conditions will drive cropland conversion to wetlands. What we need to do is convince farmers that wetlands are a "crop" that has value to humans and society (just like food crops). If we paid farmers for

growing wetlands (for WQ and Climate Resilience, etc.), I think we could unlock their expertise in cultivating plants and being caretakers of the land. I think there's a need to change the messaging and paradigm that climate will not lead to a loss of production, but rather a change in the valuable "crop" they grow.

- **Kathy Boomer**: Building on **Kevin's** comments: highlighting **1)** overlap between riparian buffers/wetland restoration and edge-of-field and edge-of-stream practices; and **2)** linkages to soil health, climate resilience, and other direct benefits could represent a strategy to engage the ag community more effectively.
- **Stephanie P. Dalke:** Exactly. Farmers control a lot of important land and have lots of skills and knowledge, but we don't always pay enough for the value of providing wetlands, and also it isn't just about money for them!
- **Kevin Du Bois**: [Farmers take] great pride that [they] provide food for the world. Check out The Farmer's Creed. Here's one site where it can be found: https://matthopkins.com/2012/05/16/the-farmers-creed/

- **Lorie Staver**: Is there funding or cost-share available to landowners for maintenance of buffers (CRP/CREP)?
- **Sophie Waterman**: Buffers are starting to become a priority again. States like MD rely on CREP more than others. PA has recently gotten money for buffers. States in the watershed have recently put together buffer plans to address things like maintenance and funding
- **Scott Phillips:** The theory of change diagram should consider including land-use decisions. Since development is the major cause for wetland loss, the issue needs to be addressed in addition to wetland restoration.
- **Suzanne Dorsey**: MDE intends to maximize progress with restoration permitting and policies and funding that incentivizes green and blue infrastructure. The Conservation Finance Act for the first time defines blue carbon and sets Maryland up to be a leader in carbon tracking and trading
- **David O'Brien**: What is the issue with permitting process? We hear this constantly but can't identify where things are breaking down.
  - **Erin Letavic**: More reviewers are needed so application review time is decreased; training for reviewers and practitioners so submittals are consistent, and review is streamlined. The length of timeframe to obtain permits can take over a year.
  - **Alison Santoro**: CBP's Stream Health Workgroup (**link**) is putting together a survey for practitioners and regulators to help identify specific issues with the permitting process. We hope to send it out in the next month or two. It is focused on streams, but the results will likely apply to wetlands as well.
  - **Erin Knauer**: Permitting requirements: we are often held to the same permitting process/standards as developers. Most recently, we also encountered regulations that are not allowing floodplain reconnection if flood area is increased, regardless of whether there are properties nearby or not (it's an open area with no properties in the vicinity/that would be affected).
  - **Ben Sagara**: most regulators have a limited background in wetland restoration permits for permanent impacts vs permits for temporary impacts that lead to biologic uplift/restoration. Would be great if we could streamline the latter.

## SESSION 2: WHERE DO WE WANT TO GO?

Attendees were asked to answer to the below Menti questions; responses can be found in **Appendix C**

- *How much progress does your jurisdiction/organization envision it will play in achieving the 2025 outcomes? (This was on a 1-5 scale with 1 being a little and 5 being a lot)*
- *What do you need to meet the Outcome for the Bay? Be creative! (e.g., targeting tools, programs regulations, rules)?*

**11:30 – VOICES FROM THE FIELD: LIGHTNING ROUND PANEL – NOVEL APPROACHES TO WETLANDS RESTORATION, CREATION, AND/OR ENHANCEMENT – *PART 1 of 2***

- **MD TIDAL PROJECT** – ***RESTORATION AND RESILIENCY OF MARYLAND'S TIDAL MARSHES: A PROJECT EXAMPLE AND A LARGER PLAN*** – *Dave Curson, Audubon*
    - Lower Wicomico River Maintenance Dredging: Deal Island WMA Marsh Restoration, Somerset County, MD. (begins 2022)
        - **Goals**: USACE Navigation Mission; Create high marsh habitat for Saltmarsh Sparrow (75 acres); protect impoundment berm from erosion
        - Learn ecological lessons for creating high marsh
        - Potential for future projects every four years due to maintenance
        - **Larger Plan**: from *Delmarva Restoration & Conservation Network Salt Marsh Restoration & Resiliency Plan*
            - Coalition of 40 partners
            - Focused specifically on the saltmarsh plan based on the Atlantic Coast Joint Venture's Saltmarsh Sparrow Conservation Plan
            - Prioritize 25,000 acres of high tidal marsh for long-term maintenance
            - Identified 80,000 acres for restoration; want to assign restoration prescriptions creating a sequenced pipeline of projects
    - The Deal Island project will include some low marsh areas, mostly as a consequence of the difficulty of applying sediment in a perfectly uniform manner. The Deal Island marshes are submerging fast so there will be no shortage of low marsh in areas surrounding the project site. Having said this, we will be consulting with NOAA and on these projects to make sure we account for priority fish habitat and low marsh areas in our planning.
    - *From initial outreach to completion, this project took 4 years*
    - **QUESTIONS/COMMENTS:**
        - **Matt Robinson**: I am interested in hearing about any experiences with beneficial reuse projects – especially projects on federal lands.
            - **Stephanie P. Dalke**: Here is some information (**LINK**) on the Blackwater National Wildlife Refuge (BWNR) marsh restoration project.
            - **Erik Meyers** The BNWR project was funded by NFWF Hurricane Sandy grant with The Conservation Fund as the lead with USFWS and other agencies and key conservation partners like Audubon. The BNWR thin-layer project was not a beneficial reuse. Sediment was mined from deep deposits at turns of Blackwater River with knowledge that eroding marsh upriver would refill the bottom contours. Pre- and post- hydro surveys showed this expectation to be true.

        - **Fredrika Moser**: Is there consideration as to why all these navigation channels have to be maintained? Are they economically critical? Just curious if the question has been asked in that direction.
            - **Chris Guy**: Wicomico River is the second largest commercial Port in Maryland.
            - **Erin Knauer**: They are navigable channels, Corps of Engineers regs.
        - **Erik Meyers**: This could be a location for combination of living shoreline projects to buffer the restored wetland from energy of open Bay waters. Thin-layer placement has been shown to restore wetlands but, obviously, does not by itself address accelerated erosion from rising sea level/ storm combination.
- **VA TIDAL PROJECT** – ***HOG ISLAND WMA SHORELINE STABILIZZATION*** – *Ethan Massey, Ducks Unlimited*
    - **Project:** 18 proposed rip-rap breakwaters with sand tombolos and marsh plantings to alleviate erosion
        - **Phase 1**: completed in 2021; completed 7 breakwaters upstream; funded by VEE & VDWR with DU & VDCR providing match
        - **Phase 2**: (remaining 11 breakwaters) is shovel ready with permits and designs; currently seeking funding sources
    - Project experienced several permitting issues that needed to be resolved
    - Construction was completed quickly with an experienced contractor
    - Tidal work was learning process for Ducks Unlimited. State agencies were helpful with knowledge and project implementation.
    - *From initial outreach to completion, this project took 4.5 years*
    - **QUESTIONS/COMMENTS:**
        - **David O'Brien**: The breakwaters originally proposed were sited too far offshore, resulting in avoidable impacts to shallow water habitat.
- **DE TIDAL PROJECT** – ***SOUTH WILMINGTON WETLANDS*** – *Mark Biddle, Department of Natural Resources and Environmental Control*
    - Highlighting this project as it is an example of cross goal completion
        - South Wilmington Wetland Park is subject to tidal flows from the river. The area is industrialized with residential zones; legacy contaminant concerns; underserved communities & addresses DEIJ concerns
    - Flooding issues since 1950s → no resources to address this until mid-2000s
    - **Purpose of Wetland Park:**
        - Create stormwater management
        - Restore degraded marsh
        - Clean up brownfield
        - Create new green space/ park
        - Provide walking connectivity
        - Enhance coastal resilience
    - Walking Connections → ADA accessible
    - Phase 2 funded recently- includes land acquisition
    - Great examples of working with many partners to achieve many environmental goals
- **DC TIDAL PROJECT** – ***EXAMPLES OF TIDAL WETLAND RESTORATION FROM THE DISTRICT OF COLUMBIA*** *– Matt Robinson, Department of Energy and Environment*

- **ANACOSTIA CORRIDOR RESTORATION PLAN (ARCRP)**: this Comprehensive Restoration Plan will help enhance resiliency of the river corridor, restore habitat, improve water quality, and enhance public access and recreation.
  - The "corridor" is defined as the entire tidal section of the Anacostia River in DC, reaching from the river channel to the upland edge of the 500-year flood plan.
  - Funded through a 2020 $500,000 NFWF Chesapeake Small Watershed Grant (SWG)
- **COMMUNITY ENGAGEMENT:** the DOEE wants as much stakeholder engagement as possible in the development of the ARCRP. To achieve this, DOEE is holding joint Federal/DC Sister Agency meetings in plan development, including implementation of a public engagement plan. This plan included:
  - Convening a Stakeholder Advisory Committee to guide planning process
  - Having at least 2 engagement meetings with the general public (to gain input on projects/concepts)
  - Interviews with 15 individual stakeholders
  - Conducting public surveys
  - Conducting outreach and engagement at pop-up events throughout the river corridor over the next 2 years
  - Gain input on plan development from stakeholders via interviews/surveys
  - Creating a project website and utilizing social media
- **KINGMAN LAKE:** 5-year project focusing on fringe wetlands, living shorelines, freshwater mussels, and SAV beds across 158 acres of the lake
  - Early implementation funded by the 2020 NFWF SWG
  - Project will be constructed during toxic sediment remediation → will be utilizing dredge spoils for restoration.
  - DOEE issued a $700k RFP in December 2021. Applications are currently under review and the award will be made in April or May.
- *From initial outreach to completion, this project took 10 years*
- **QUESTIONS/COMMENTS:**
  - **Jonathan Watson**: What approximate percentage of this restoration work is being undertaking in historically filled wetlands compared to existing surface waters?
    - **Matt Robinson**: All of Kingman Lake is essentially fill – the Anacostia, historically, was chock full of wetlands. I think it's safe to assume that all of this work will be restoration.

**1:00 – VOICES FROM THE FIELD: LIGHTNING ROUND PANEL – NOVEL APPROACHES TO WETLANDS RESTORATION, CREATION, AND/OR ENHANCEMENT – *PART 2 of 2***

- **MD NON-TIDAL PROJECT** – ***POCOMOKE RIVER FLOODPLAIN RESTOATION PROJECT*** – *Steve Strano, Natural Resources Conservation Service*
  - **Pocomoke River**: one of the northernmost cypress swamps in US; 4,250 acres of floodplain disconnected from river
    - 18.4 miles of channel were reduced to 14.3 miles by CCC dredging and straightening in the 1940's; dredging also created 28 miles of spoil levee. This construction degraded the river, deepened the channel, and increased the delivery of nutrients.
    - The Nature Conservancy, USFWS, MD DNR, and USDA NRCS were all partners on this project

- **Planning and outreach:** 2 floodplain project areas (3,400 and 850 acres)
  - Able to overlay the 102 individual parcels of land to understand who owned which part of the floodplain
  - Good Lidar data helped facilitate the development of this project
  - Targeting where spoil levee breaches can be installed
  - Direct outreach through mailings, phone calls, and face-to-face interactions with landowners
  - Provided participation incentives
  - Partnerships for outreach, funding, design, and implementation
- **Results:**
  - 165 breaches installed
  - 2,750 acres of floodplain reconnected
  - 1,580 acres of perpetual Wetland Reserve Easements
  - 60+ parcels of lands involved
  - Cost prohibitive to remove all of the spoils
- *Freeing a Trapped River: Pocomoke Restoration* – a video created by The Nature Conservancy (**LINK**)
- *The majority of this project took 10 years, but work is still ongoing*
- **QUESTIONS/COMMENTS:**
  - **Melissa Yearick**: Was the corridor still forested wetland, or was it too dewatered to classify as such?
    - **Steve Strano:** Yes, it was still a forested wetland, which made the project somewhat easier to implement because we weren't removing ag land from production. Our focus was getting those 2 to 10-year storms back into the floodplain.

- **VA NON-TIDAL PROJECT – *HUNTLEY MEADOWS PARK WETLAND RESTORATION*** – *Dave Lawlor, Fairfax County, VA*
  - **Huntley Meadows Park is the largest non-tidal wetland in VA**
  - Utilized local taxpayer money for project (through bond)
  - Park managed with environmental education focus
  - **Why wetland restoration?**
    - **In 1985:** healthy ecosystem with nationally breeding birds, high biodiversity, and excellent water quality
    - **In 2007:** silt deposits, reduced water levels, and low biodiversity
  - **CRITERIA FOR PROJECT SUCCESS:**
    - Collect quality data for evidence to gain stakeholder support
    - Establish significant and achievable goals (e.g., improved water quality, increased wetlands, bring biodiversity/ breeding birds back)
    - Create monitoring and survey plan to assess restoration goals; parameters include biodiversity of birds and vegetation
  - **FUNDING STRATEGY:** (the main hurdle)
    - Determine wants and needs of community and stakeholders
    - Gain public and stakeholder support (~60 meetings with the public to talk about project)
    - Gain political support once stakeholders are onboard

        - Secured bond money through voting referendum (voting in Fairfax Co.); need ~$3 million
    - **PROJECT BENEFITS:**
        - Improved water quality for Potomac River
        - Created 20-30 acres of wetlands and enhanced ~30 acres of wetlands
        - Local citizens and politicians prioritized wetlands by funding restoration
        - Vegetation improved
        - Increased sightings of target species
        - VA Rails bred in wetland in 2016
- **DC NON-TIDAL PROJECT** – ***AGLER PARK UPLAND LID & STREAM & WETLAND RESTORATION PROJECT*** – *Josh Burch, Department of Energy and Environment*
    - 35 acres of draining area
    - **WETLAND DELINEATION**: forested portion of the wetland needed to have minimized impacts from projects
    - Lower Alger Park was mostly Japanese knotweed prior to this project – this was due to a result of erosion in the upper stream
    - **GOAL:** to create a wetland with two flow paths flowing through it
    - Cleared out knotweed prior to stream restoration → Stream restoration was a success!
    - **CHALLENGES:** resource conversion, permitting, perception, invasive control, funding
    - **OPPORTUNITIES:** floodplain connection and wetland restoration/creation, daylighting, stability, habitat creation, plant diversity and aesthetics, no more mowing
- **DE NON-TIDAL PROJECT** – *Alison Rogerson, Department of Natural Resources and Environmental Control*
    - **Monitoring Restoration for Improved Wetland Functions:**
        - Using wetland assessment projects to create wetland restoration criteria
        - Raising expectation for wetland restoration
        - Results of project are voluntary (not regulatory)
    - **PROJECT TIMELINE**:
        - 2007- rapid assessments
        - 2017- looked at progress overtime
            - Construction designs and performance standards are not specific to wetland types and not based on natural wetland conditions
            - Determined performance criteria by wetland type, using over 20+ years of wetland data
            - Created rapid assessment method to evaluate created, restored, or enhanced wetlands
    - **NEXT STEPS:** pilot testing, scoring, outreach, workshop training
- **PA NON-TIDAL PROJECT: BARRIERS & OPPORTUNITIES** – *Andy Klinger, Department of Environmental Protection*
    - **Multiprogram credit accounting:**
        - Programs working within virtual silos, crediting across all programs can help remove silos
        - Removing silo-ing due to permitting we get: wetland and stream mitigation, MS4 reductions, nutrient reductions, flood resiliency
    - **Prior Converted Cropland acreage:**
        - Preferred BMPs
        - Landowner willingness

        - Better incentives
        - Exploring co-benefits (restore wetlands within same footprint as ag BMP)
    - **Finite resources:** time, funding, personnel
    - **Successful project** → Big Spring Run
- **NY NON-TIDAL PROJECT** – ***PARTNERING TO EXPAND WETLAND RESTORATION*** – *Melissa Yearick, Upper Susquehanna Coalition*
    - Melissa provided a video presentation, which can be viewed here: https://www.u-s-c.org/USCWetlandProgram.mp4
- **WV NON-TIDAL PROJECT** – did not participate in the workshop

**2:00 – BREAKOUT GROUPS**: Following the presentations, workshop attendees divided into breakout groups for small group discussions. There were four breakout group options: Tidal Practitioners, Non-tidal Practitioners, Leadership, and Practitioners & Leadership (for those whose jobs encompass both roles). Attendees self-identified and joined the corresponding breakout group. Ideas discussed in each breakout group were captured using a Jamboard. These Jamboard responses are recorded in **Appendix E.**

- *General Questions (addressed in all four breakout group types):*
    - *What would it take to do many more of these projects to accelerate the rate of functioning wetlands?*
    - *What can your organization do to accelerate progress to the 2025 Outcome?*
- **Tidal Practitioners:** *What are the ideas for tidal wetlands that can put us on schedule to move us closer to our Outcome?*
- **Non-tidal/Watershed Practitioners**: *What are the ideas for non-tidal wetlands that can put us on schedule to move us closer to our Outcome?*
- **Leadership**: *What governance changes need to be made at the local, state, or federal level to maximize attainment of Outcome?*
- **Practitioners and Leadership**: *What are the programs that have the greatest amount of funding we can access for non-tidal and tidal wetlands? Why are some programs being undersubscribed?*

**3:15 – DAY 1 WRAP UP: KEY TAKEAWAYS AND OVERVIEW OF DAY 2 AGENDA –** *Dave Davis and Sherry Witt (GDIT)*

**3:30 – DAY 1 ADJOURNED.**

# DAY 2 – AUGUST 3rd, 2022

**LINK TO PRESENTATIONS AND MEETING MATERIALS**

**10:00 – OPENING COMMENTS & PARTICIPANT FEEDBACK** – *Dave Davis, Sherry Witt*

- List of Day 2 attendees included in **Appendix B**
- **Taryn Sudol** (NOAA, MD Sea Grant) announced that Maryland Sea Grant is hosting a similar workshop on large scale tidal restoration. The workshop will be held on October 6th and will focus on design approaches, maximizing benefits, and other topics. If you want to be added to the invite list, email Taryn at sudol@mdsg.umd.edu. The workshop is limited attendance in person and unlimited attendance virtually. More information can be found at this website: https://www.mdsg.umd.edu/large_scale_wetland_bmp_workshop
- **Matt Robinson** announced that the DC Anacostia River Corridor Restoration Plan (DC ARCRP) has a brand-new webpage (https://restoretheanacostiariver.com/anacostia-corridor-restoration-plan). DC will be focusing on identifying marshes, living shorelines, SAV beds, and other restoration projects in this plan. For those interested in learning more about the project, please visit the website for more information.

## SESSION 3: HOW DO WE ACCESS FUNDING?

- Menti polling questions: **responses included in Appendix D**
  - **Question:** *Based on what you've heard from Day 1, prioritize where should funding be focused?* **Possible Answers:** *monitoring, design/permitting, outreach/stakeholder engagement, implementation [restoration/creation, enhancement], grants match, and capacity.*

**10:15 – PANEL PRESENTATIONS: OUR CURRENT TRAJECTORY: FUNDING OPPORTUNITIES – FEDERAL, STATE, & NON-FEDERAL PANEL**

FEDERAL PANELISTS:

- **National Oceanic & Atmospheric Administration – *HABITAT RESTORATION FUNDING UNDER THE BIPARTISAN INFRASTRUCTURE LAW: WETLANDS OPTIONS* –** *Sean Corson*
  - **BIPARTISAN INFRASTRUCTURE LAW (BIL):** signed into law November 15, 2021
    - NOAA received $3 billion to be dispersed over 5 years. There are different timetables and stipulations associated with different disbursements. More information can be found here: http://www.noaa.gov/infrastructure-law
  - **HABITAT RESTORATION AND RESILIENCE:** $491 million over 5 years
    - Funds are for restoring marine, estuarine, coastal, and Great Lakes ecosystems and enhancing coastal community resilience. systems, estuaries. Bonus points for looking at resiliency and climate related themes.
    - **Two funding opportunities in 2022:** *Both opportunities under this $491 million are weighted towards underserved communities*
      - Transformational Habitat Restoration and Costal Resilience Grants
      - Coastal Habitat Restoration and Resilience Grants for Underserved Communities

- **TRANSFORMATIONAL HABITAT RESTORATION AND COSTAL RESILIENCE GRANTS:** *$85 million/year for 5 years*
  - **Award Range:** Project sizes are between $1-15 million
  - **Closes:** September 6th
  - **Opportunity Number:** NOAA NMFS HCPO 2022 2007195
  - **Contact**: Resilience.Grants@noaa.gov
  - **Additional Information:** This is a great source of funding for the kind of projects we're talking about: capacity building, planning, and implementation opportunities. The awards will be better received by technical reviewers if couched within larger context. For example, thinking about tidal wetlands, for NOAA these projects must have a positive benefit for NOAA trust resources. Largely tidal areas of the Bay. The Hog Island, Delmarva, and Wilmington projects would be applicable for this kind of funding but best received if talked about in context of larger Bay restoration programs.
- **COASTAL HABITAT RESTORATION AND RESILIENCE GRANTS FOR UNDERSERVED COMMUNITIES:**
  - **Award Range:** $75k to $1million
  - **Opportunity Number:** NOAA NMFS HCPO 2022 2007354
  - **Closes**: September 30th
  - **Contact:** Underserved.Community.Grants@noaa.gov
  - **Additional Information:** $10 million set aside for underserved communities. There will be more of an emphasis on capacity building in these areas.
- **ADDITIONAL NOAA FUNDING FOR HABITAT:**
  - **Fish Passage: $**400 million over 5 years (15% Tribal set aside)
  - **National Oceans and Coastal Security Fund Grant Program:** $492 million over 5 years
  - **Habitat Restoration Coastal Zone Management Program:** $207 million over 5 years
  - **Habitat Restoration National Estuarine Research Reserves:** $77 million over 5 years
  - **Pacific Coast Salmon Recovery:** $172 million over 5 years

- **U.S. Fish & Wildlife Service,** *Rick Bennett*
  - **PARTNERS FOR FISH & WILDLIFE PROGRAM:** Service provides technical and financial assistance to plan, design, supervise and monitor customized habitat restoration projects. Projects are voluntary and customized to meet landowners' needs.
    - **Available to:** landowners, managers, tribes, corporations, schools and nonprofits
    - Projects designed to benefit federal trust species including migratory birds, endangered, threatened and at-risk species
    - **Prioritization:** priority projects provide habitat for rare, threatened and endangered species
    - **Project Duration:** Minimum duration of 10 years
    - **Partnerships:** The Service partners with other federal agencies, state agencies and nongovernmental organizations to complete projects on private lands. Landowners do not forfeit property rights and are not required to allow public access
    - **NORTHWEST REGION GOALS:**
      - Conserve and protect wildlife
      - Broaden and strengthen partnerships
      - Improve information sharing and communication
      - Increase accountability

        - **FUNDING LEVELS:** $57,715,000 FY22, for FY23 it will increase to over $60 million (final amount is pending house/senate approval).
    - **CHESAPEAKE WATERSHED INVESTMENTS FOR LANDSCAPE DEFENCE (WILD):**
        - 5 PILLARS/THEMES:
            1. Sustain and enhance restoration and conservation activities by conserving a resilient network of fish and wildlife habitats and connecting corridors, with an emphasis on at risk and federally listed species and their habitats.
            2. Address climate change by increasing scientific capacity and supporting strategic planning, monitoring, and applied science activities necessary to ensure resilience of natural ecosystems and habitats impacted by changing climate and development.
            3. Increase capacity and support for coordinated restoration and conservation activities in the Chesapeake Bay watershed, particularly in historically and systemically under resourced communities, through outreach, education, and civic engagement.
            4. Enhance recreational opportunities and public access with a strong emphasis on equitable access to nature and all associated benefits, consistent with the ecological needs of fish and wildlife habitat.
            5. Improve and sustain water quality, upgrade water management capability, and reduce flood damage, with an emphasis on green infrastructure and natural infrastructure to support fish and wildlife populations, their habitats, and drinking water for people.
        - This program fits a niche that isn't covered by other programs – it's habitat oriented and is in the Bay.
        - **FY22:** program received $4 million in funding. Used the NFWF EPA Small Watershed Grant Program to announce potential funding of Chesapeake WILD funds. Many proposals were received.
        - **FY23:** will use a separate RFP for Chesapeake WILD funding. Final amount is pending.
    - **AMERICA THE BEAUTIFUL**: year 1 just closed but will be available for the next 4 years. This funding opportunity was through NFWF and was ecosystem oriented.
        - **Funding**: $375 million over 5 years (from infrastructure legislation); Has match requirements.
    - **FISH PASSAGE**: central priority in the region
        - USFWS fisheries program receives money directly to support fish passage and has fish passage engineers in the region available to assist in design.
        - Additional $200 million over 5 years to support fish passage through the bipartisan infrastructure legislation.
    - **NATIONAL COASTAL WETLANDS CONSERVATION GRANTS:** In 2022, 25 projects in 13 states were awarded a more than $20.1 million total to protect and/or restore over 61,000 acres of priority coastal and riparian habitat, and several miles of shoreline
- **Environmental Protection Agency,** *Martha Shimkin, Deputy Director of CBPO*
    - CBPO is grateful to the CBP Partnership for making sure the CBP gets funding and support to continue. As part of Infrastructure Law, the CBP received funding that wetland restoration can tap

into. Look at outcomes other than water quality to see what we can support. Strategically plan for future years to spend money to meet most outcomes.

- *CBP shared a matrix of outcomes, agencies, and infrastructure funding earlier this spring and this matrix can be available upon request.*
    - This funding table, provided by Amy Handen, displays funding sources related to the BIL (Bipartisan Infrastructure Law), points of contacts, and the potential applicability to the CBP outcomes, with links to additional information. ***Please note that this matrix is a living document and is only as accurate as its last update***
    - **Link to the Matrix**: https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/funding_-_amy_handen_-_infrastructure_funding_summary_spreadsheet_042522.xlsx
- **In order to support a project, it is necessary to know:** how much funding is needed, how it relates to outcomes in the Agreement, and what is the funding vehicle (how are we putting the money out there).
- **Three important themes at the EPA and CBPO**: environmental justice, climate resiliency, and local investments.
- This year, nonfederal cost sharing for grants was waved for infrastructure funds. Future years may have similar opportunities to waive cost shares.
- Bottom line: there is unprecedented funding and support available now, which provides an opportunity to make as much progress as possible.
- **How can a community leverage state revolving funds:** this is an area of a huge influx of infrastructure funds. Funds can be leveraged through SRF financing, and may qualify for loan forgiveness or grants.

- **Natural Resources Conservation Service (NRCS),** *Dan Ludwig*
    - **Environmental Quality Incentives (EQIP) Program:** provides financial assistance for conservation practices.
    - **Wetland Reserve Easement Program:** the federal government works with landowners to purchase permanent easements in PA (other states within Bay have 30-year easements). NRCS purchases the easement to keep the land in perpetuity; however, landowners retain rights to use that property and NRCS covers the restoration cost for restoring wetlands. For every acre of wetland eligible, can enroll an additional buffer acre. One challenge is focusing on restoring hydric cropland back to wetland. NRCS works with landowners with existing wetlands; however the goal is to restore degraded wetlands.
    - **Wetland Reserve Enhancement Partnership**: FY2023 NRCS has $20mil available for technical assistance. Presently looking to enter partnerships to enroll easements, which can be evaluated from an individual land-owner standpoint, watershed, or geographic area. Match is required (at least 10% cash or in kind to match for easement due diligence cost or restoration costs.) and this is only available for governments and NGOs. Individuals may not apply for partnership agreement. Once this is awarded NRCS will work with partners to identify individual landowners.
        - ***There will be a project meeting on September 17th, 2022. Contact Lisa McCaully (lisamccauley@usda.gov) for more information.***
    - **Regional Conservation Partnership Program (RCPP):** part of the 2018 Farm Bill and is awarded up to $300mil annually to enter into partner agreements on watershed or geographic areas. There is an easement component of this NRCS can work with and individual practice implementation.

        - Generally, it's a 1:1 match for this opportunity. For the Bay, that would fit into critical conservation area, statewide there's a fund pool you can go into.
        - For those with EPA CBP grants, there is a memorandum between NRCS and EPA stating if you receive an RCPP agreement, some of your EPA funds may be used as a match for the RCPP.
    - **QUESTIONS/COMMENTS:**
        - **Olivia Devereux**: Can NRCS provide a total number of acres in easements in the Chesapeake Bay watershed?
            - NRCS Easements are publicly available here: https://nrcs.maps.arcgis.com/apps/webappviewer/index.html?id=60cb4564f7b4461ca9a61fa224c066ba
- **U.S. Army Corps of Engineers Norfolk District,** *Dan Bierly (USACE Baltimore District) presenting on behalf of Michelle Hamor (Norfolk District)*
    - USACE is not a granting agency – a project sponsor is needed for all programs. The Corps leads the efforts it is involved with.
    - **PLANNING ASSISTANCE TO STATES (PAS):** PAS is technical assistance program that does not lead to construction. The Corps acts as consulting engineers on planning studies related to water issues and flooding, including modeling.
    - **SECTION 510:** 510 is solely for Chesapeake Bay and is a design/construction/implementation. This if for smaller projects with less than $10mil in total cost.
    - **CONTINUING AUTHOTIY PROGRAM (CAP):** this program includes a number of standing authorities which are funded every year at the national level. Funds are distributed to projects at the agency's discretion. There are a few of the authorities that could be useful for constructing wetlands. Section 204 is one of the programs that is specifically for the beneficial use of dredged material. CAP projects are smaller and typically anything over $10 - $15 mil would not fit.
    - **CAP 206**: Another CAP authority that is specific to ecosystem restoration. The focus is aquatic habitat, such as stream restoration and wetlands work restoration. Due to the program's nationwide popularity, funding is difficult to obtain.
    - **GENERAL INVESTIGATIONS**: These are studies for large projects (>$15mil). Requires Congressional authorization for a study and then again for construction. There is no limit to project size (example, Mid-Bay Island, Everglades Restoration, etc.).
    - **HOW TO ACCESS FUNDING:** USACE doesn't start projects, they are approached by non-federal entities who agree to be project sponsors.
    - *"Bring your problems to us and we'll find solutions together!"*
    - **QUESTIONS/COMMENTS:**
        - **Chris Guy:** For those getting Bipartisan Infrastructure Law (BIL) funding, that means additional capacity needed for federal agencies. How are you dealing with that? Are you able to absorb it or are you planning to hire for additional capacity so we can get the money out in a better way? How are federal agencies dealing with getting it out?
            - **Martha Shimkin:** We saw this coming when the law was passed in November, and had been working to determine what our needs to implement were. We put out hiring announcements and brought on some new people and will continue to bring in 1-2 more. Because of that and excellent staff, we've already allocated $40mil of $47.6mil that came in this year and have a plan for the rest. We've gotten great support from jurisdictions. Hiring has also helped us.

- **Rick Bennett**: It's a mixed bag for us. At the departmental-level they retained money to cover administrative costs associated with implementation of America the Beautiful. We received some bill funding for the DE program which the Chesapeake WILDS is built off. We retained some funding for capacity to implement the program. For fish passage, because there was already a program and process established, there wasn't as much of a need to do that. For Chesapeake WILD, taking funds we received and retaining some to support admin and implementation. Can't run these things without people and expertise so we build it in.
- **Chris Guy**: Is there consideration for capacity when money goes out to jurisdictions and locals? Can the money coming thru the bill be used to build capacity on local, state and NGO level?
- **Rick Bennett**: We have the DE funds, the Chesapeake WILD funds. We ran things and have capacity building as component of that. Mike Slattery can speak to that. We built it in recognizing there is a need; everyone needs capacity to implement. Particularly when trying to reach underserved capacity; they don't have capacity. Just asking them to engage doesn't work. We build it in where appropriate and where we can.
- **Martha Shimkin**: We have already shared with jurisdictions that the funding can also support with technical assistance and implementation.

<u>NON-FEDERAL & STATE PANELISTS:</u>

- ***National Fish & Wildlife Foundation,*** *Jake Reilly, Director of Chesapeake Bay Programs*
  - NFWF's Chesapeake Bay programs directly support the Chesapeake Watershed Agreement and TMDLs.
  - Presently, NFWF is especially "open for business" for wetlands work (wetland restoration, black ducks, etc.).
  - **AMERICAN BLACK DUCK GOAL:** increasing wetland habitat and available food to support 5,000 wintering black ducks (5% of the Chesapeake Bay Watershed Agreement goal). Activities contributing to this outcome by 2025 include improving food resources by restoring/creating 7,000 acres of tidal and non-tidal wetlands. Currently, NFWF is halfway to that goal, but 3,000 more acres are needed before 2025.
  - **CHESAPEAKE BAY STEWARDSHIP FUND GRANTS PROGRAMS:** restricted to Chesapeake Bay. NFWF isn't federal but deals with federal funding. The Innovative and Small Watershed programs are beneficiaries of the Infrastructure Bill. The plan is to deliver these dollars to wetlands and riparian forest buffers explicitly. Both programs do not have a federal matching requirement.
    - **INNOVATIVE NUTRIENT & SEDIMENT REDUCTION GRANTS PROGRAM:** Up to $1mil award; U.S. EPA is the primary funder; RFP coming out later this month; focus on <u>nontidal</u> wetlands.
    - **SMALL WATERSHED GRANTS:** Up to $500k award; U.S. EPA is the primary funder; spring solicitation and lower match requirement; focus on <u>tidal and nontidal</u> wetlands. This is a smaller program but now has more money than innovative program.
    - **CHESAPEAKE WILD:** up to $750k award; USFWS is the primary funder; spring solicitation and 1:1 match requirement; focus on <u>tidal and non-tidal</u> wetlands.

        - National programs: America the Beautiful. Very competitive. $100 milion available with over $1 billion requested. Awards of up to $5 million. Only available for states and tribes.
        - National Coastal Resilience funds. Max $10 million awards.
    - **QUESTIONS/COMMENTS:**
        - **Jill Whitcomb**: With the different reporting requirements for IIJA, how will NFWF communicate that to the grantees?
            - **Jake Reilly**: If you're thinking about the equity requirements, we have existing tools in house to report out information on communities impacted. Otherwise, reporting will follow our standard processes, appended as necessary by any additional IIJA requirements
        - **Kristin Saunders**: **1)** Do administrators of SRF programs have the ability to prioritize wetlands and **2)** can the various other federal, state and NGO grant funds be used as the "revenue" to repay low interest loans?
            - **Aaron Wendt**: In VA, DCR's state-funded agricultural cost-share funds can be and are used to repay the SRF loans offered by DEQ to agricultural producers
            - **Robert Boos**: PENNVEST has been funding every eligible project that is administratively and technically ready to go so ranking or prioritization wouldn't come into play because everyone is getting funded.
- ***Pennsylvania,*** *Robert Boos, PA Infrastructure Investment Authority (PENN VEST)*
    - PENNVEST is a state-revolving loan program that implements federal capitalization grants and pulls together funding sources to fund clean water projects.
    - **HOW CAN PENNVEST HELP:** Drinking water, wastewater, stormwater, non-point source (e.g., green infrastructure, ag BMPs, etc.), and lead testing & remediation.
    - **PENNVEST FINANCING:** since 1988, 4,523 projects have been approved for a total funding of $10.7 billion. Presently, approx. $800 million is funded annually, mostly through low interest loan projects. PENNVEST funding is eligible anywhere in PA and the SRF program can be used for match dollars.
    - **BOARD MEETINGS:** 4x/year to ensure projects are progressing.
    - **WEB-BASED SYSTEM:** There are application cut off dates, and this is a fully online system.
    - **CONTACTS:** For those thinking about PENNVEST funding opportunities, contact the regional project specialists covering different areas of PA.
        - **Region 1 –** Northwest PA – Brendan Linton (blinton@pa.gov)
        - **Region 2 –** Southwest PA – Dan Mikesic (dmikesic@pa.gov)
        - **Region 3 –** Southcentral PA – Tess Schlupp (tschlupp@pa.gov)
        - **Region 4 –** Northeast & Southeast PA – Rebecca Hayden (rebkennedy@pa.gov)
        - **Region 5 –** Northcentral PA – Leslie Cote (lecote@pa.gov)
    - Best way to connect with PENNVEST is through the website: www.pennvest.pa.gov
    - **QUESTIONS/COMMENTS:**
        - **Link to the Potential Restorable Wetlands layer in PA**: https://www.pasda.psu.edu/uci/DataSummary.aspx?dataset=3136
- ***Virginia,*** *Mike Crocker, Department of Environmental Quality*
    - **CLEANWATER FINANCING & ASSISTANCE PROGRAM:** Virginia Clean Water Revolving Loan Fund (VCWRLF aka CWSRF); Water Quality Improvement Fund; Stormwater Local Assistance Fund (SLAF)

- **VIRGINIA CLEAN WATER REVOLVING LOAN FUND:** solicitation closed last week. There were 73 applications for just under $500 million.
  - **Annual solicitation**: June-July
  - Local government, PSAs, & nonprofits
  - **Eligible Projects:** Wastewater treatment, stormwater and agriculture BMPs, brownfields remediation, land conservation, and living shorelines.
- **CLEAN WATER REVOLVING LOAN FUND:** opportunities for wetlands restoration and enhancements
  - Projects can be standalone (funded independently)
  - Low, subsidized Interest rates. May qualify for Green Project Reserve – which has opportunities for reduced or zero interest rates.
  - Also have potential for grant money
  - **CHALLENGES**: project identification; defining responsible parties; partnership arrangements; debt service are hard sell on non-utility projects; many projects are funded in pursuit of water quality credit/permit compliance
  - **PROJECT EXAMPLES:** City of Norfolk (wetlands and living shorelines); Middle Peninsula (living shorelines); City of Waynesboro (constructed wetlands)

- ***New York,*** *Cassie Davis, Department of Environmental Conservation*
  - **CHESAPEAKE BAY NORTHERN HEADWATERS:** 19 NY counties are within the watershed boundary; approx. 70% forested and 3% wetlands
  - **CURRENT EFFORTS & INTENDED RATE OF IMPLEMENTATION:** WIP 3 acreage goal of approx. 1,3000 acres of restored wetlands, which is very close to being achieved. There is no WIP 3 target for wetland creation nor rehabilitation.
  - Major focus in NY is ecosystem services
  - **NY GRANT PROGRAMS** (*each have competitive state funding available*): Water Quality Improvement Program, Climate Smart Communities Grant Program, Environmental Justice Grant Program, and the Climate Resilient Farming Program
  - **UPPER SUSQUEHANNA COALITION (USC)**: most of the conservation practices implemented are through USC
    - USC provides on the ground implementation and technical support in agriculture, stream corridor rehabilitation, and wetland restoration
    - USC has a dedicated wetland team
  - **SUPPORT NEEDED**: increased staff capacity, continuing funding for technical assistance and grant assistance, and administrative costs. Having flexible program and funding sources would allow for bundling multiple projects together. Also need to reinvest in aging capital equipment.
- ***Delaware,*** *Mark Biddle, Department of Natural Resources and Environmental Control, Regional Team Manager*
  - **Most of DE lies in the coastal plain**. Delmarva has wet soils and no natural drainage. Construction to improve drainage for crops led to draining wetlands. Most wetland projects occur on agricultural lands and a few on state-owned wildlife areas. Opportunities came from multiple objectives including identifying poorly drained cropland.
  - **Partnership with agriculture is important**.
  - **HAINES FARM PROJECT EXAMPLE**: prior to construction was a straight ditch; changed to meandering curves. Flood plain to capture flow before enter stream. Conducted study to see how

wetland cells retained nitrogen and phosphorous. Small cells placed in landscape may improve water quality better than single large ones.

- **Important to look for nontraditional sites**. DNREC has partnered with schools, leveraged nontraditional funding sources, and sought other opportunities on publicly owned lands.
- **Don't forget to have fun!**
- **DELAWARE WETLAND RESTORATION WORKGROUP (DWRG)**: formed to coordinate leveraging resources. Looking forward to using the influx of fed funding and better utilize SRF and partnering with local governments to get projects on the ground. The challenge is most local governments don't have staff capacity to put together proposals. There is a need for an increase in organizational structure and capacity. Moving forward, folks should consider how to ease match requirements where it's restricting capacity and implementation for other funding.
- **QUESTIONS/COMMENTS**:
  - **Erik J. Meyers**: How have farmers responded to reduction of cropland as result of wetland restoration/creation with ditch projects?
    - **Mark Biddle**: We've had mixed reaction to the reduction in cropland, but if we tie it into other on-farm water quality improvements it helps. It also helps if the land taken out of production has been traditionally marginally productive.

- ***Maryland,*** *Sarah Hilderbrand, Department of Natural Resources*
  - **CHESAPEAKE & COASTAL SERVICE:** All funding info can be found on grants gateway website (https://dnr.maryland.gov/ccs/Pages/funding/grantsgateway.aspx).
  - **Grant funds come from state and fed sources:** Chesapeake & Atlantic Coastal Bays Trust Fund, Coastal Resiliency Program, Waterway Improvement Fund, NOAA, and EPA's Chesapeake Bay Program.
  - **5 Categories of grants:**
    - Accelerate recovery and restoration of natural resources by implementing non-point source pollution reduction projects.
    - Enhance capacity to understand and effectively plan to address flood risks associated with a changing climate.
    - Utilize natural and nature-based infrastructure to enhance resilience to climate change.
    - Improve student ability to take action benefiting Chesapeake and coastal ecosystems through outdoor learning and stewardship.
    - Foster sustainable development and use of Maryland waterways with projects that benefit the general boating public.
  - **THE CHESAPEAKE & ATLANTIC COASTAL BAYS TRUST FUND:** Approx. $50mil in funding is generated annually through motor fuel and car rental tax. Funding is competitive, and projects are selected based on geographic targeting.
  - Wetland restoration aligns well with MDNR's Trust Fund goals. Since 2010 MDNR has supported over 3,000 acres of wetland restoration.
  - **Resiliency through restoration:** funds utilize natural and nature-based infrastructure to enhance resilience to climate change and should address short- and long-term climate impacts. There were 19 pilot projects in FY19-21, covering a range of restoration techniques and addressing flooding and sea level rise.
  - **WATERSHED ASSISTANCE GRANT PROGRAM:** provides funding for design and watershed assessment. Allows Trust Fund to target construction-ready projects

- **QUESTIONS/COMMENTS:**
  - **Woody Francis**: Does "shovel ready" projects mean that they already have permits/approvals to complete the project or are they still needed? If they're still needed, while not yet secured, the project may be considered "shovel ready" but be unable to proceed forward.
    - **Sarah Hilderbrand**: To be shovel ready, MDNR tries to have projects as far along with design and permitting as possible so there is a full understanding of how and when funds will be used, but if the permits are still in the works, the projects can still be considered.
  - **MDNR Grants Gateway:** https://dnr.maryland.gov/ccs/Pages/funding/grantsgateway.aspx
  - **Trust Fund Project Map/Story Map (outcome 1):** https://maryland.maps.arcgis.com/apps/MapSeries/index.html?appid=f7adba8f56924bc58a95d2fac56ec954
  - **Resiliency through Restoration Story map (outcome 3):** https://maryland.maps.arcgis.com/apps/MapJournal/index.html?appid=4b2608d5e34d40cfb77b50e16805649f

- ***West Virginia (did not participate in this workshop)***
- ***District of Columbia,*** *Matt Robinson (DC DOEE) presented on behalf of Jen Dietzen (DC DOEE)*
  - Majority of DC DOEE's work has been in streams, but they are looking to get into tidal wetlands.
  - Tidal Anacostia River Corridor Project.
  - **BAG LAW FOR SINGLE-USE PLASTIC BAGS:** DC has a bag law for single-use plastic bags. This funding goes to a special revenue fund that can be used for wetland restoration. DOEE has used it for stream restoration and can also use it for wetlands.
  - **Presently looking to implement natural resource damage assessments**
  - **ANACOTIA RIVER SEDIMENT PROJECT:** remediating toxic sediments. Projects funded through settlements with responsible parties.
  - **KENILWORTH PARK LANDFILL:** owned by Washington Gas, looking to implement restoration projects. Taken advantage of fed funding. We currently have a coastal resilience grant from NFWF. Josh Birch leading that project. Will be some small wetland restoration. Utilize clean water SRF. Currently project on list for wetland restoration along Anacostia, Kingland lake. Application expected to be awarded soon through FEMA for designs for wetlands on Kennelworth landfill.
- **POST-PANEL DISCUSSION, QUESTIONS/COMMENTS:**
  - **Jana Davis:** The Chesapeake Bay Trust has several wetlands funding opportunities as well, including through our general grant programs (which fund living shorelines, other tidal, and nontidal) and one specifically for nontidal wetlands in Maryland (with MDE). Reach out to Sarah Koser (skoser@cbtrust.org) for ideas.
  - **Rich Mason**: I think we need a fresh look at the way funding moves from agencies to NGOs (NFWF and others) to other NGOs, to finally resulting in on the ground results. Wetland practitioners spend too much time seeking funding from several different funding sources. We need a much simpler and less time-consuming method that results in on the ground wetland restoration and protection. What if we flipped this around where a website is developed where practitioners entered projects or a batch of projects in a template and once filled out, funders would get notified of the opportunity to fund a project. Practitioners would not have to apply for multiple sources - just one application. Reporting would be standardized on this site too. This may also

create a better opportunity for private funding for site-specific projects. I have been working on restoration projects and grant programs since the early 1990's and what has changed is that there is more $ available.

- **Jennifer Starr**: Local government welcomes your idea and has been advocating for a "Common App" website for funding.
- **Kristin Saunders**: I have been wondering same - how can we make all the pots of money work seamlessly together?
- **Dave Goerman**: A block grant approach would provide significantly more flexibility.
- **Jill Whitcomb**: Not only a block grant program, but upfront capital is a necessity. Wherever it comes from (from a grant, low-interest loan, private, etc.) is key, and so allowing for a large chunk of the funds to be provided to the sponsoring entity to work with up front is critical.PA has been using a block grant program that isn't specifically prioritizing wetlands, but counties can apply for different project types that meet their Countywide action plan (CAP) priority initiatives, inclusive of wetland restoration.
- **Jill Whitcomb**: We use an allocation-based method and counties submit an application that outlines the project types and strategies for spending the funds on an annual basis. I would like to see more dedicated funding, in a long-term (5 years) where everyone knows what they're getting, and it doesn't fluctuate.

- **Forrest Vanderbilt:** An interesting model for collaboration is the ***RIBITS (Regulatory In-lieu Fee ad Bank Information Tracking System)*** website in that you can search for opportunities https://ribits.ops.usace.army.mil/ords/f?p=107:2:3149363624937::NO::
- **Jeremy Hanson**: the weekly Bay Brief from the CBP lists active funding opportunities. worth signing up for anyone who hasn't already: https://www.chesapeakebay.net/action/newsletters
- **Kathy Boomer**: Check out the ***ACTION RFA*** to explore different outreach strategies to increase conservation practice adoption: https://foundationfar.org/grants-funding/opportunities/achieving-conservation-through-targeting-information-outreach-and-networking-action-program-request-for-applications/

**11:50 – OPEN DISCUSSION**

- **Menti Question:** *What action(s) can the federal, state, or grantee organization take based on what you heard today that would move us towards Outcome attainability by 2025?*
  - Responses recorded in **Appendix D**

## SESSION 4: HOW ARE WE GOING TO GET THERE?

**1:15 – ACTION PLAN PROPOSAL –** *Dave Davis*

- Within three months following the workshop, the Workshop Steering Committee will work with partners and workshop participants to develop an Action Plan that outlines steps and a timeline for dedicating resources to implementing these approaches.
- **This Action Plan will be presented to the CBP Management Board at the December 2022 meeting.**
- **STRUCTURE OF THE ACTION PLAN:**
  - **Introduction**: A summary from the workshop's Session 1: "Where have we been".
  - **Management Strategy & Approach**: A summary from the workshop's Session 2 "Where do we want to go" and Session 3: How can we get there from here."

- **Action**: Each partner will write a 1-to-2-page action strategy outlining how they will implement the actions identified in this Plan. Comes largely from Session 4 breakout session and report outs, and the fall 2022 follow up meetings.
- **Next Steps**: Summary of the workshop and action items and begins the framework of the wetlands works beyond 2025. Will establish timelines and milestones for actions described in this plan.

**1:25 – SMALL GROUP DISCUSSIONS: *HOW ARE WE GOING TO GET THERE?***

- During this discussion session, workshop attendees were split into 7 different breakout groups to discuss "How are we going to get there?". There were seven breakout groups, one for each Jurisdiction. Those in attendance self-selected their breakout group according to the jurisdictions.
- During these breakout groups, the attendees discussed the following Jamboard questions: (**responses can be found in Appendix F**)
  - *How do we incorporate these new approaches/ideas into our processes and efforts for non-tidal and tidal wetlands? (e.g., How are you going to increase capacity? What types of funding have the greatest influence in your jurisdiction?)*
  - *How do we address them in the development of an action plan?*

**2:50 – IMPLEMENTATION OF APPROACHES PANEL**

- A panel of policy, management, and science experts shared their perspectives to the approaches discussed in the previous breakout group session and how they can get us on the trajectory for outcome attainability for wetlands in the Bay watershed.
- *Are these approaches implementable? Will they help us get where we want to go? What else do we need to consider? How can we make it better?*
- **Panelists:**
  - Chesapeake Bay Program – ***Kristin Saunders**, Cross Goal Implementation Team Coordinator*
  - VA DEQ – ***Dave Davis**, Director of the Office of Wetland and Stream Protection*
  - USFWS – ***Cheyenne Owens**, Special Assistant to the Chief of Staff, Directors Office*
- **Kristin Saunders:**
  - The adaptive management framework is what led to this workshop; understanding what worked and what hasn't worked. We can't continue to have random acts of conservation and restoration. Targeting and being strategic is key.
  - There are a lot of tools developed by partners: from GIS tools, to decision support tools whether species specific or across the board. Several folks have talked about creating a tool to get a better idea to target work. Before creating a new tool, look at the ones that exist: https://gis.chesapeakebay.net/targeting/
  - What if wetlands were the focus and the goal, and water quality was the co-benefit? Consider this reframing so decision makers can embrace this work.
  - **Lessons from our successes:**
    - **Commitment** from an organizational and leadership standpoint as well as individual
    - **Have a highly visible leader at state or federal level**
    - **Have specific targets and metrics**. May even consider voluntary goals within each jurisdiction
    - **Have a plan based on targeting for multiple benefits**
    - **Have dedicated funding**

        - **Being open to creative financing**
        - **Think big/look large scale**
        - **Broad partnership implementation:** what if we cluster likeminded people or people who have specific expertise share their expertise across the watershed, not just in a specific geographic location [3:23]. Have a big plan and understand how everyone plays a role in the implementation so you have the expertise where you need it and people aren't trying to do everything everywhere.
        - **Don't forget about prevention.** Much attention on restoration; but prevention is more affordable than restoring what's lost. We have the ability to work with local officials and make sure important resources are protected. If we only have our eyes on restoration, we'll continue to lose wetlands.
        - We have pushed on **land conservation community** to get involved in this effort both forest buffers and wetlands because they have the ability and money to buy land or conservation easements and bring financial resources to this work. If we can't get private property owners to convert their land, we can get lands that are marginal but in great places for wetland migration. Untapped opportunity to combine land conservation and wetland restoration.
- **Dave Davis:** About 8-10 yrs ago DEQ and VIMS tried to figure out who was doing restoration activities and we hit a roadblock. I think there is more restoration activity that occurs on the ground than is captured. Better tracking who's doing what, where would be helpful.
- **Cheyenne Owens:**
    - While the task is formidable this workshop highlights the passion and drive to make this happen. Continued efforts will be needed to keep us accountable.
    - Communication with each other, the public, landowners, coordination, collaboration needed to achieve our goals.
    - There is a presidential initiative, Justice 40, for environmental justice, accountable for all federal agencies 40% of fundings need to benefit communities of color, rural communities, low-income communities. Keeping that EJ element in mind.
        - **Link for additional information on Justice 40:** https://www.whitehouse.gov/environmentaljustice/justice40/
    - Communication and outreach plans, linking wetlands to climate change and EJ should be part of communications, as well as economic benefits of wetlands.
    - Capacity: encourage people to get creative. Leverage details, internships, cost sharing with partners.
    - Draft list of USFWS wetlands grant opportunities: https://drive.google.com/file/d/193WAWpH24oGtAmIuXpr32y0ItL_rK9SW/view?usp=sharing
    - Sentinel Landscapes: special category in America the Beautiful, can open up additional opportunities (**Link: https://sentinellandscapes.org/**)

**3:15 – DAY 2 WRAP-UP –** *Dave Davis*

- **THE WAY FORWARD:** preparing for & presenting at the December 2022 Management Board Meeting
    - **The Wetland Action Plan will be presented to the CBP Management Board at the December 2022 meeting.**
- **WETLAND WORKGROUP:** For those interested in joining the CBP Wetland Workgroup, please email Pamela Mason (mason@vims.edu) and Katlyn Fuentes (fuentesk@chesapeake.org)

- **GOOGLE SURVEY**:
    - A Google Poll was distributed to those in attendance, and those that were interested in participating in continued wetland discussions moving forward completed the poll.
    - **Survey responses included in Appendix G**

**3:30 – WORKSHOP ADJOURNED.**

## 2022 Restoring Wetlands of the Chesapeake Bay Watershed Workshop

**August 2-3, 2022, 10:00 a.m. – 3:30 p.m. ET**

***Link to Meeting Materials***

# APPENDICES TO THE MEETING MINUTES

**CONTENTS:**

## APPENDIX A: DAY 1 WORKSHOP ATTENDANCE (n=*154*)

1. Aaron Wendt, VA DCR
2. Adrienne Kotula, Chesapeake Bay Commission, VA
3. Alex Vidal, USFWS
4. Alicia Berlin, USGS
5. Alison Rogerson, DNREC
6. Alison Santoro, MD DNR
7. Allison Colden, CBF
8. Allison Ng, EPA
9. Allyson Gibson, Lancaster Clean Water Partners
10. Amy Goldfischer, CRC
11. Amy Jacobs, The Nature Conservancy
12. Andy Klinger, PA DEP
13. Andy Lacatell, The Nature Conservancy
14. Ann Swanson, Chesapeake Bay Commission
15. Anne Hairston-Strang, MD DNR
16. Anne Wakeford, WV DNR
17. Aurelia Gracia, NPS
18. Doug Austin, EPA
19. Becky Golden, MD DNR
20. Ben Sagara, VA DWR
21. Bill Jenkins, EPA
22. Breck Sullivan, USGS
23. Brent Hunsinger, River Friends
24. Brian Lamb, USGS
25. Britt Slattery, NPS
26. Brittany Sturgis, DE DNREC
27. Brittney Flaten, DNREC
28. Carin Bisland, EPA
29. Cara Johnson, CRC
30. Cassie Davis, NY DEC
31. Charmaine Dahlenburg, National Aquarium
32. Cheyenne Owens, USFWS
33. Chris Guy, USFWS
34. Chris Moore, Chesapeake Bay Foundation
35. Christine Conn, MD DNR
36. Dan Bierly, USACE
37. Dan Murphy, USFWS
38. Danielle Algazi, EPA
39. Danielle Szimanski, USACE
40. Dave Curson, Audubon
41. Dave Davis, VA DEQ
42. David Lawlor, Fairfax County, VA
43. David O'Brien, NOAA
44. David Seaborn, MDE
45. Denise Coleman, USDA NRCS
46. Dimitri Rucker, USFWS
47. Ed Farley, Ducks Unlimited
48. Edwin Martinez, USDA NRCS
49. Elliott Campbell, MD DNR
50. Erik Meyers, The Conservation Fund
51. Erin Knauer, Ecosystem Planning & Restoration
52. Erin Letavic; Herbert, Rowland & Grubic, Inc.
53. Ethan Massey, Ducks Unlimited
54. Faren Wolter, USFWS
55. Felix Abel-Ferretti, MD DNR
56. Fiona Koye, USDA NRCS
57. Forrest Vanderbilt, USGS
58. Fredrika Moser, MD Sea Grant
59. Garrett Stewart, CRC
60. Gina Hunt, MD DNR
61. Greg Barranco, EPA
62. Jaime Argo, USDA FSA
63. Jake Reilly, NFWF
64. Jamileh Souiedan, CRC
65. Jana Davis, Chesapeake Bay Trust
66. Jason Fellon, PA DEP
67. Jayme Arthurs, USDA NRCS
68. Jeannie Riccio, MD DNR
69. Jeff Lapp, EPA
70. Jeff White, TetraTech
71. Jeffrey Hartranft, PA DEP
72. Jennifer Starr, LGAC Alliance for the Bay
73. Jeremy Hanson, CRC
74. Jill Whitcomb, PA DEP
75. Joe Toolan, NFWF
76. Joel Carr, USGS
77. John Taucher, PA Game Commission
78. Jonathan Leiman, MDE
79. Jonathan Watson, NOAA
80. Jorge Bogantes, Anacostia Watershed Society
81. Josh Burch, DOEE
82. Julie Reichert-Nguyen, NOAA
83. Justin Markey, USFWS
84. Karinna Nunez, VIMS
85. Karri Honaker, USDA NRCS
86. Kathy Boomer, Foundation for Food & Agriculture Research
87. Katie Ombalski, Woods & Waters Consulting
88. Katie Stahl, USFWS
89. Katlyn Fuentes, CRC
90. Ken Staver, University of Maryland
91. Kevin Du Bois, US DOD
92. Kevin McLean, VA DEQ

93. Kristen Saacke Blunk, Headwaters LLC
94. Kristin Saunders, UMCES
95. Lauren Taneyhill, NOAA
96. Leah Franzluebbers, USFWS
97. Leon Tillman, USDA NRCS
98. Lori Maloney, EBTJV
99. Lorie Staver, UMCES
100. Margaret Zacharias, EPA
101. Marisa Baldine, CRC
102. Mark Biddle, DE DNREC
103. Mark Hoffman, Chesapeake Bay Commission
104. Martha Shimkin, EPA
105. Mary Andrews, NOAA
106. Maryann Reed, USDA FSA
107. Matt Robinson, DC DOEE
108. Megan Fitzgerald, EPA
109. Melissa Yearick, Upper Susquehanna Coalition
110. Michael Roberts, The Coastal Trust
111. Michelle Hamor, USACE Norfolk District
112. Michelle Henicheck, VA DEQ
113. Mike Evans, Chesapeake Conservancy
114. Mike LaSala, Land Studies
115. Mike Slattery, USFWS
116. Nancy Roth, TetraTech
117. Nicole Carlozo, MD DNR
118. Nikki Rovner, The Nature Conservancy
119. Olivia Devereux, Devereux Consulting
120. Pam Mason, VIMS
121. Patrick Vincent, USDA NRCS
122. Patti Webb, DE DNREC
123. Peter Gibbs, USDA NRCS
124. Rachel Lamb, MDE
125. Renee Thompson, USGS
126. Rese Cloyd, DC DOEE
127. Rich Mason, USFWS
128. Rikke Jepsen, ICPRB
129. Sandy Davis, USFWS
130. Sandra Demberger, USFWS
131. Sara Bottenfield, VA DCR
132. Sarah Fleming, Ducks Unlimited
133. Sarah Hilderbrand, MD DNR
134. Scott Bearer, PA
135. Scott Lerberg, VIMS
136. Scott Phillips, USGS
137. Sean Corson, NOAA
138. Sherry Witt, General Dynamics Information Technology
139. Sophia Blanco Seufert, USFWS
140. Sophie Waterman, CRC
141. Stacey Bradshaw, USDA NRCS
142. Stephanie Dalke, University of MD
143. Stephanie Jacobs, EPA
144. Stephen Faulkner, USGS
145. Steve Strano, USDA NRCS
146. Su Fanok, The Nature Conservancy
147. Susanna Massalon, Ducks Unlimited
148. Suzanne Dorsey, MDE
149. Taryn Sudol, UMCES
150. Tim Haydt, PA Game Commission
151. Todd Lutte, EPA
152. Wendy Walsh, Tioga County Soil & Water
153. Woody Francis, USACE Baltimore District
154. Zack Greenberg, The Pew Charitable Trusts

## APPENDIX B: DAY 2 WORKSHOP ATTENDANCE (n=126)

1. Aaron Wendt, VA DCR
2. Adrienne Kotula, Chesapeake Bay Commission
3. Alicia Berlin, USGS
4. Alison Santoro, MD DNR
5. Allison Ng, EPA
6. Allyson Gibson, Lancaster Clean Water Partners
7. Amy Goldfischer, CRC
8. Amy Jacobs, The Nature Conservancy
9. Andy Klinger, PA DEP
10. Andy Lacatell, The Nature Conservancy
11. Anne Hairston-Strang, MD DNR
12. Anne Wakeford, WV DNR
13. Aurelia Gracia, NPS
14. Becky Golden, MD DNR
15. Ben Sagara, VA DWR
16. Bill Jenkins, EPA
17. Breck Sullivan, USGS
18. Brian Lamb, USGS
19. Britt Slattery, NPS
20. Brittany Sturgis, DE DNREC
21. Brittney Flaten, DE DNREC
22. Cara Johnson, CRC
23. Carin Bisland, EPA
24. Cassie Davis, NY DEC
25. Cayla Sullivan, EPA
26. Charmaine Dahlenburg, National Aquarium
27. Cheyenne Owens, USFWS
28. Chris Guy, USFWS
29. Christine Conn, MD DNR
30. Dan Bierly, USACE
31. Dan Ludwig, USDA NRCS
32. Danielle Algazi, EPA
33. Dave Davis, VA DEQ
34. Dave Goerman, PA DEP
35. David Maginnes, Maginnes Productions
36. David Seaborn, MDE
37. Derrick McDonald, PA DEP
38. Dimitri Rucker, USFWS
39. Doug Austin, EPA
40. Ed Farley, Ducks Unlimited
41. Elliott Campbell, MD DNR
42. Erik Meyers, The Conservationr Fund
43. Erin Knauer, Ecosystem Planning & Restoration
44. Erin Letavic, Herbert, Rowland & Grubic, Inc.
45. Ethan Massey, Ducks Unlimited
46. Faren Wolter, USFWS
47. Felix Abel-Ferretti, MD DNR
48. Fiona Koye, USDA NRCS
49. Forrest Vanderbilt, USGS
50. Fredrika Moser, MD Sea Grant
51. Gina Hunt, MD DNR
52. Greg Barranco, EPA
53. Jaime Argo, USDA FSA
54. Jake Reilly, NFWF
55. James Martin, VA DCR
56. Jana Davis, Chesapeake Bay Trust
57. Jayme Arthurs, USDA NRCS
58. Jeff Fretwell, MDE
59. Jeff Lapp, EPA
60. Jennifer Starr, LGAC Alliance for the Bay
61. Jeremy Hanson, CRC
62. Jill Whitcomb, PA DEP
63. Joe Toolan, NFWF
64. Joel Carr, USGS
65. John Taucher, PA Game Commission
66. Jonathan Leiman, MDE
67. Jorge Bogantes, Anacostia Watershed Society
68. Julie Reichert-Nguyen, NOAA
69. Karinna Nunez, VIMS
70. Karri Honaker, USDA NRCS
71. Katheryn Barnhart, EPA
72. Kathy Boomer, Foundation for Food & Agriculture Research
73. Katie Ombalski, Woods & Waters Consulting, LLC.
74. Katlyn Fuentes, CRC
75. Kevin Du Bois, US DOD
76. Kevin McLean, VA DEQ
77. Kristen Saacke Blunk, Headwaters LLC.
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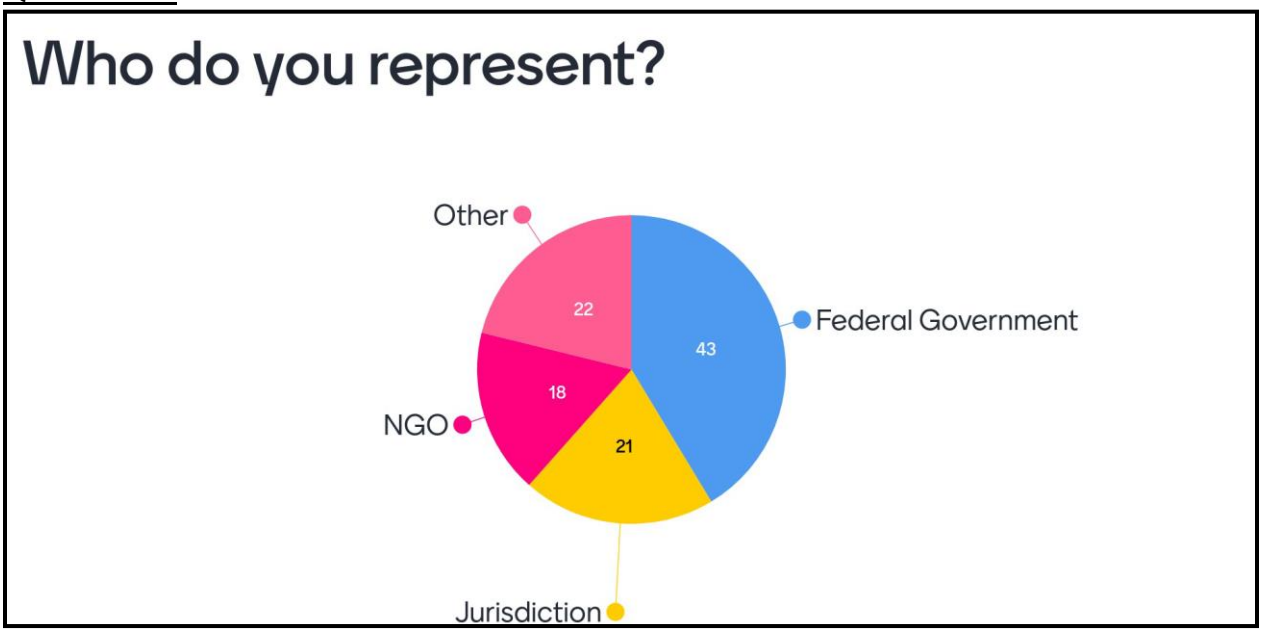
80. Leon Tillman, USDA NRCS
81. Lorie Staver, UMCES
82. Marisa Baldine, CRC
83. Mark Biddle, DE DNREC
84. Mark Hoffman, Chesapeake Bay Commission
85. Martha Shimkin, EPA
86. Mary Andrews, NOAA
87. Matt Robinson, DC DOEE
88. Megan Fitzgerald, EPA R3
89. Melissa Yearick, Upper Susquehanna Coalition
90. Michael Roberts, The Coastal Trust

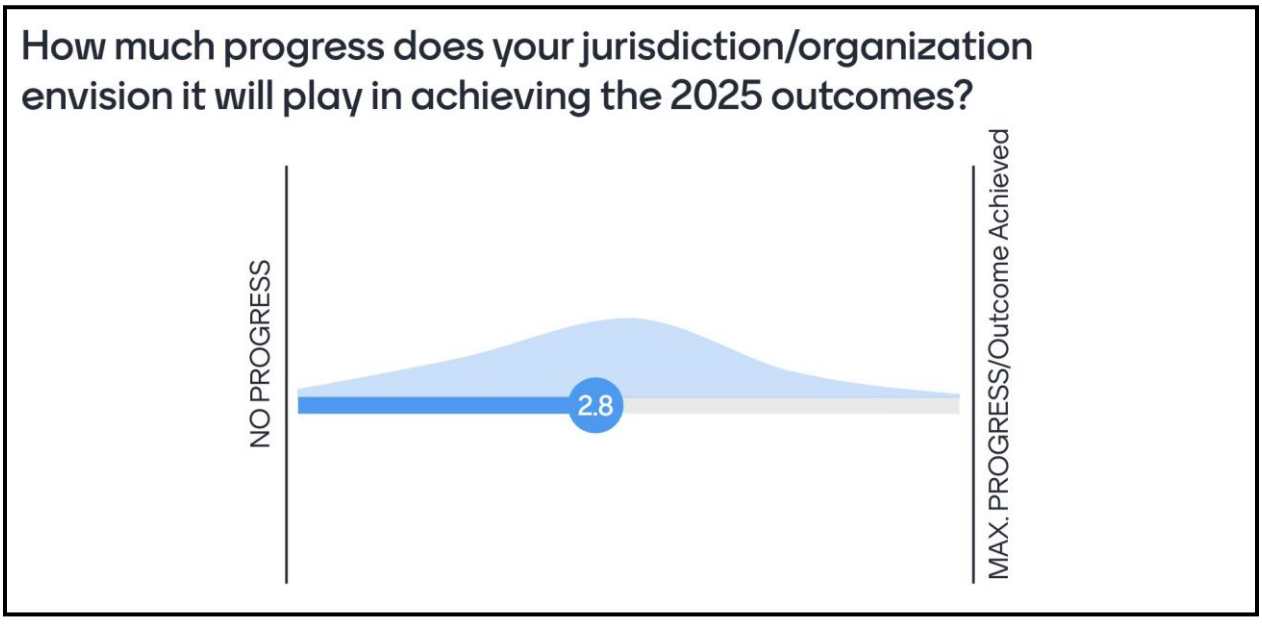
**91.** Michelle Henicheck, VA DEQ
**92.** Mike Crocker, VA DEQ
**93.** Mike Dryden, The Nature Conservancy
**94.** Mike LaSala, Land Studies
**95.** Mike Slattery, USFWS
**96.** Nancy Roth, TetraTech
**97.** Nicole Carlozo, MD DNR
**98.** Nikki Rovner, The Nature Conservancy
**99.** Olivia Devereux, Devereux Consulting
**100.** Pam Mason, VIMS
**101.** Peter Gibbs, USDA NRCS
**102.** Rachel Lamb, MDE
**103.** Rese Cloyd, DC DOEE
**104.** Rich Mason, USFWS
**105.** Rick Bennett, USFWS
**106.** Robert Boos, PA Infrastructure Investment Authority
**107.** Sandra Demberger, USFWS
**108.** Sandy Davis, USFWS
**109.** Sara Bottenfield, VA DCR
**110.** Sarah Fleming, Ducks Unlimited
**111.** Sarah Hilderbrand, MD DNR
**112.** Scott Lerberg, VIMS
**113.** Scott Phillips, USGS
**114.** Sean Corson, NOAA
**115.** Sherry Witt, General Dynamics Information Technology
**116.** Sophie Waterman, CRC
**117.** Stacey Bradshaw, USDA NRCS
**118.** Stephanie Jacobs, EPA
**119.** Steve Strano, USDA NRCS
**120.** Su Fanok, The Nature Conservancy
**121.** Susanna Massalon, Ducks Unlimited
**122.** Taryn Sudol, Maryland Sea Grant
**123.** Todd Lutte, EPA
**124.** Wendy Walsh, Tioga County Soil & Water
**125.** Woody Francis, USACE Baltimore District
**126.** Zack Greenberg, The Pew Charitable Trusts

**APPENDIX C: Day 1 Menti Responses**

**QUESTION 1:**




**QUESTION 2:**




**QUESTION 3:** *What do you need to meet the Outcome for the Bay (e.g., targeting tools, program regulations, rules, etc.)? *Responses have been edited for clarity**

1. Establishment of a state program in Virginia
2. Strengthen the existing programs- CRP/CREP. Put the money back into the existing programs- make it worthwhile to participate, and make matching easier in them
3. Targeting tools to show wetlands can also address other CBP outcomes
4. Better, clearer regulatory priority for tidal wetland restoration
5. Tracking and accounting info for projects and funding so we can manage adaptively
6. Circuit rider expertise
7. Flexible funding
8. Better understanding of conservation financing
9. Staff
10. Convincing landowners (with $$)
11. Increased technical staff/capacity
12. More biologists and techs on the ground
13. Cross pollination for funding and outcomes. Need to have wetlands be a thought in everything we do, much like DEIJ
14. Community buy-in/trust
15. Staffing capacity, more training and coordination, consistency, and updates on status of outcomes; more education and outreach
16. Success stories
17. Prioritizing key areas for outreach and engagement
18. State agency capacity for projects
19. Better tracking of wetland practices
20. More people to help with proposal writing, engineers/implementation, project managers
21. Outreach materials; funding that can be used for landowner easements outside federal programs; practitioners workgroup to brainstorm restoration options
22. Restoration targeting mapper: tidal and nontidal
23. Hire additional staff
24. Additional staff
25. NFWF create non-match funding to support training of technical experts to work on technical transfer to private landowners to increase areas for wetland migration
26. Outreach tools and guidance on successful ways to reach the public; funding
27. Unified regional prioritization for tidal wetland enhancement based on objective measures that consider entire mosaic of marsh habitat and verified with field surveys
28. More funding to identify most effective restoration locations. Biogeochemical hotspots for N are different than sediment/P physical processes; need to understand sources, sinks, connectors spatially.
29. Funding and capacity
30. Funding, make it regulatory priority/incentivize
31. Simplify permitting process
32. Update regulations and permitting requirements
33. Additional staff, training, increased collaboration with partners
34. Ease permitting challenges; maybe training on permitting process for tidal projects
35. Funding
36. Prioritize, plan, cost out, restructure goal, receive commitments
37. Partner collaboration to piece together projects
38. Avoiding impacts; additional staff; more face time with public
39. Identify target priority areas - target available funding opportunities, pursuing multiple benefits (habitat, flood, etc.)
40. Some more staff and partners

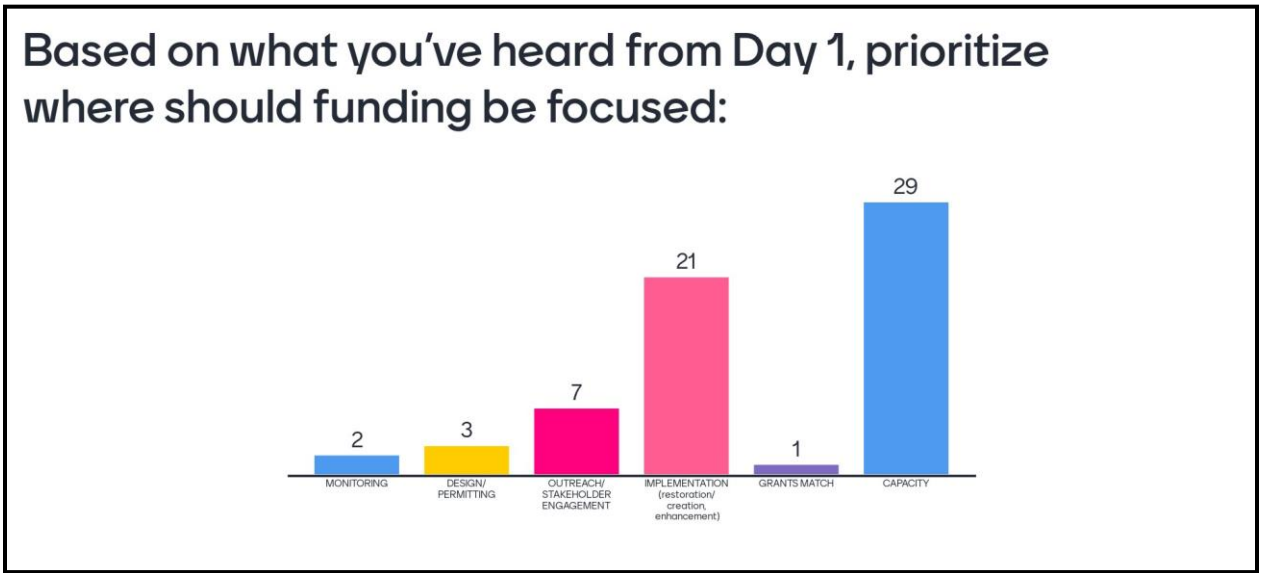
41. Funding tied to different aspects of wetland ecosystem services, not just nutrient and pollutant reduction
42. Develop approach to track wetland credits that may be generated from other projects, such as stream restoration that may include floodplain wetlands
43. Greater emphasis within the watershed
44. Delineate between what if and what is. Trying to force the "what if" to be the "what is", so need to rethink how we measure the "what is".
45. State Revolving Funds
46. Establish state FTE support through Federal funding, similar to Clean Water Act.
47. Partnerships between the Government and NGOs
48. Funding not restricted to MEBs
49. Funds
50. Projects need to be clearly identified. Restoration is not needed on every square inch of wetlands. Prioritize good sites and the funding and permitting will be a lot easier.
51. Clear coordination with current TA providers on how to maximize/increase producer/farmer willingness to participate in wetland restoration
52. Funding
53. Sustained support for capacity (not just grants)
54. Prioritizing barriers that need to be removed that can be funded beyond just implementation
55. Identifying/tool to identify most likely sites for success/longevity of restoration (tidal), easier permitting and faster implementation time scales
56. Stack restoration/ resilience techniques in coastal areas
57. Communication guidance as well as technical assistance
58. Local experts to support landowners
59. Funding for reinvestment into capital equipment that implement projects
60. More permit reviewers
61. Meeting landowners where they are - offering them something they need/want, even if just more $$
62. Outreach, outreach, outreach
63. Increase depth (overall amount) and breadth (# of programs/partners engaged in promoting) of financial incentives
64. Targeting information related to marsh migration and sea level rise
65. Wetland restoration people – since there hasn't been much work, it is a dying profession
66. Better communication between organizations
67. Improved siting tools so we can set priorities for wetland areas to be restored and migration corridors
68. Predictable funding for monitoring to evaluate project success and inform adaptive management
69. Farmer advocates to speak to their peers (as trusted parties) about the value of ag wetland restoration
70. Hire additional staff
71. Shovel-ready projects
72. Credits for facilitating wetland migration… i.e., through land conservation and various management approaches
73. Examine capacity expansion in the Farm Bill; Land Grant training and certification?
74. Increased engagement of private sector that has historically worked in mitigation fields, but not in this field
75. More communication within our agency
76. One stop funding application
77. Climate mitigating design parameters
78. On tidal - getting regulatory agencies in agreement so permitting barriers are reduced

**79.** We need to support a clear effort to bring resources and skilled to underserved and underestimated communities. We need more discussion about the built environment, not just rural areas for wetland restoration and creation.

**80.** Flexibility in granting requirements to allow for regulatory process and pursuit of measures to avoid/minimize impacts to achieve acceptable resource tradeoffs.

## APPENDIX D: Day 2 Menti Responses

**QUESTION 1:**




**QUESTION 2:** *What actions can federal/state/or grantee organizations take, based on what you heard today, that would move us towards Outcome Attainability by 2025?*

1. PA and VA should create programs like MD's Trust Fund
2. Identify priority sites so that agencies can work cooperatively to achieve restoration goals at landscape scales
3. Use wetlands as a job creation opportunity by funding full-time positions in the public sector and continue to provide technical capacity grants to the non-profit/private sector
4. Funding flexibility... continuously open funding streams where once a threshold is achieved (e.g., certain checkboxes for a project) then "here is the money to implement" in lieu of periodic windows for applying for funds
5. States could hire someone that is dedicated to the wetland goal to help coordinate and streamline efforts and secure additional funding
6. Concerted effort by funders to have a unified strategic plan on what wetland projects to fund; that is, if all state agencies in a jurisdiction would coordinate that variety of funding programs to collaboratively attain the outcome
7. Allocations for each state for the wetland and black duck goals – that would create some accountability and responsibility. The starting point could be what they have in their WIPs, and considering what they have done in the past, then divvy up remains.
8. Partnership-building
9. Work on the development of siting tools
10. Communicate benefits of wetlands for ecosystem services such as carbon sequestration, flood resiliency, habitat restoration, and local water quality benefits to municipalities and landowners
11. Leverage the focus on climate resilience to pursue wetland restoration projects
12. Is it possible to reduce match requirements and/or provide some grants that do not require matches?
13. Update technical guidance on wetland restoration techniques, varying by physiographic province

14. Assign a coordinator to reach across state/federal/NGO groups to move individual projects forward as a collective effort
15. Building capacity within EJ communities to access grant funding
16. Advocate for my organization to leverage funding towards achieving common goals across programs. Tap expertise in wetlands within org
17. Block grants as opportunities for implementation
18. Tie wetland goals to carbon sequestration goals to entice corporations with ESG goals to contribute to the program
19. Connecting funding with partners
20. Provide technical assistance
21. Launching the Targeted Resiliency Area initiative to deliver technical assistance to a geographic focus area - resulting in a pipeline of resiliency projects that leverage habitat/GHG/WQ benefits that will be eligible for state and federal funding
22. Support the identification of projects
23. Develop state-based restoration efforts in Virginia

## APPENDIX E: Day 1 Jamboard Responses

**QUESTION 1:** *What would it take to do many more of these projects to accelerate the rate of functioning wetlands?*

- Link wetland restoration to strategies for climate resilience and drought mitigation
- Very few of the projects we saw were on private agricultural lands. Those projects require "boots on the ground".
- Regulatory mandate
- Public-private partnership with outcomes based on contracts
- Get appropriations for VA HB 354
- Fully fund federal projects
- Funding sources that have performance success metrics
- Large property owner-buy-in & consent
- Good incentives for landowners are very important
- Collaborative and shared strategic plan with unified social marketing and outreach campaigns
- Reduce regulatory burden
- More flexibility in CRP/CREP programs for private landowners
- Focusing on one effort. I work with multiple programs - while we have great potential, we are limited by time and staff.
- Get buy-in from National Park Service and other federal landowners on these projects. Streamline the permitting process. Have them apply consistent review standards across the board. DoD can be a partner (situation dependent)!
- Securing (or raising) funds to adequately compensate landowners to retain and/or restore wetlands
- Increased staff capacity in areas of permitting, project management, and program coordination.
- While building momentum, ensure that partner coordination is maximized so that it isn't a mad dash to do everything everywhere to expend money without strategy.
- More aggressive outreach and landowner engagement
- Attach wetlands funding to public park improvement funding (two for one)
- Secure the Virginia Security Corridor Sentinel Landscape Designation
- Fiscal resources at state agency to provide technical assistance to landowners, including design engineers to get to shovel-ready projects
- We've seen how having knowledgeable and enthusiastic staff on the ground conducting outreach can make a big difference. Then you need to have biologist and engineering techs that prioritize wetlands projects.
- Leadership Commitments: jurisdictional hiring permanent staff to coordinate outreach and funding.
- Having multiple funding sources within a dedicated partnership can be extremely valuable for large-scale projects.
- Link wetland restoration to strategies for climate resilience and drought mitigation
- Regulatory mandate
- Leverage private funding
- Revised permitting processes tailored to restoration projects that provide habitat value
- Additional regulatory staff complement to ensure permitting and compliance
- Revise procurement policies to support more private sector involvement

- Develop tidal wetland prioritization planning to identify sites suitable for long-term restoration success. Prioritize sites that avoid functioning habitats and address sources of degradation
- Target, target, target - find the places in the watershed that are ripe for this work and use the cross trained outreach folks to get to those property owners
- Develop uniform assessment, monitoring, and adaptive management frameworks incorporated (and funded) across projects
- Matrix the implementation of a watershed wide wetlands plan - identify the target areas (USGS/CBPO), scrub the WIPS to add wetland practices where it makes sense and can meet multiple outcomes beyond water quality (jurisdictions), hire organizations like Upper Susquehanna Coalition and TNC to conduct the outreach and engagement in concert with other technical service providers, have states identify how their funding sources can be surged to these target areas and implemented through NGOs
- Cross-train anyone doing landowner, farm, private property outreach, technical assistance and engagement so they understand the whole suite of options for their property (soup to nuts conservation/restoration practices)
- Require standards for consistency along with success criteria
- Better connect reporting of stream restoration and floodplain reconnection to wetland restoration
- Highlight direct benefits to landowners and have capacity to present restoration opportunities that fit with landowner's knowledge of their property
- More boots on the ground for private landowner engagement - especially for large landscape scale projects
- Technical assistance!
- Assistance for communication and community outreach to supplement the technical/engineering/design support
- Expand the consultant capacity with the qualifications/training to design and implement high-quality projects
- Better communication tools for practitioners who are not as familiar with wetland restoration/re-establishment opportunities to share with landowners
- Better / more easily understood Chesapeake Bay Model crediting
- Greater access to technical and outreach experts for individual projects (Like SMARTeams in New England)
- Less federal match required to use CBIG/CBRAP grants
- More engineering capacity for project design
- Funding that doesn't necessarily require federal match
- Establish agency operating budgets that include funding for adequate levels of staffing to ensure agency function
- Consistent funding sources
- Tidal wetland plan with identified criteria and priority locations identified to better compete for National Federal grants

**QUESTION 2:** *What would it take to do many more of these projects to accelerate the rate of functioning wetlands?*

- Utilize partners
- Work with local watershed groups or other NGOs
- Translate science to decision-makers to get more decision makers and funder support

- Earmark available state funded agricultural cost-share for wetland restoration (tidal & non-tidal)
- Get buy-in from National Park Service and other federal landowners on these projects. Streamline the permitting process. Have them apply consistent review standard across the board.
- Develop a SERPAS/SASMI-like framework for wetland conservation and restoration for the CB watershed
- USGS could work with partners to bring together existing targeting tools for wetlands into one place. We could also improve land characterization of wetlands to better track their change over time.
- Keep hiring technical staff to respond to the project funding allocations (State/Fed partners - keep the project funding coming!)
- Facilitate/convene folks doing the work, coordinating landowner engagement
- Participate in the development of the wetland conservation plan as part of NOAA's (VA) Middle Peninsula Habitat Focus Area
- Develop decision-support tools. Ex: Restoration Mapper
- Build capacity for project management
- More people and energy focused on outreach and getting landowners started
- Train more folks in grant-writing and familiarize them with funding opportunities
- Respond to as many grant funding requests (e.g., NFWF) as possible to increase likelihood of obtaining grant funds for wetland work
- Climate Resiliency Workgroup can assist with identifying resilience metrics for tidal wetlands and identify marsh adaptation projects through GIT-funded project.
- CBPO can help with identifying target or focus areas
- CBPO can help stitch together the collective effort of the jurisdictions (review the WIPS to see where wetlands can be added as BMPs in their plans, tally up how that stacks against the goals, identify federal funding sources and financing opportunities) and drive accountability and momentum

**QUESTION 3:** *What are the ideas for non-tidal wetlands that can put us on schedule to move us closer to our Outcome?*

- Look into options to purchase/ protect properties and then do the restoration
- Look into opportunities for other types of restoration projects and think outside the box
- Cross train technical assistance people - anyone who has landowner contact (land conservation, forest buffers, wetlands or other ag practices)
- What if we gather up all the engagement/technical assistance providers across the watershed who know this work and bundle the work so successful NGOs like TNC and Upper Susquehanna do the outreach and implementation they do best. Get the Bay program to work with the jurisdictions to identify focus or target areas. Matrix the implementation and management of a wetlands master plan by having people do what they do best across the watershed instead of only their local area.
- Private consultants finding sites - what are ways that we can incentivize landowners to do voluntary restoration vs selling for mitigation? Tax incentives for land being restored.
- Accepting that living shorelines are going to be more expensive per unit (whatever you are measuring) because they meet another goal too: How do we not be scared by that? Pro-rate them somehow?
- Chesapeake Bay Training Academy? To help train newer employees on design, delineation, etc. Need more staff so that existing staff can access training.

- Need for specialized training for new employees; Create mentorship program or work to overlap positions
- Concern that the same resources (funding and people) are being asked to achieve wetland and forested buffer goals
- Include co-benefit analysis to prioritize funding for projects like wetlands that have high co-benefits and move away from strict TMDL credit cost efficiency
- Increase TA competencies (and willingness) to discuss proactively and positively with farmers the opportunities connecting them to wetlands restoration options
- Re-evaluate local WIPs to increase wetland restoration targets so that local TA folks find more creative ways of getting wetland acres on the ground. NOT to re-do WIP - but to retool it so that wetland targets are better represented.
- Streamline permitting so that conservation or restoration projects have a much simpler and quicker review. If you have to guess it will take 1-2 years to get a project through the permitting process so much momentum will be lost...
- Support field-based folks in recognizing whether practice reporting is beneficial to be wetlands-based or streams based or buffer based - to decrease duplicate reporting and maximize the correct credit for the practice.
- Target already protected lands for wetlands enhancement, extension, restoration - where land use is less of an issue
- Investigate floating wetland technology as a means of increasing wetland restoration in areas where living shorelines are not possible. Need to look at the science and how (if) they can be certified as official BMPs.
- Incentivize/Reward high performing conservation districts that are getting wetland acres delivered - and/or ag practitioners
- Maximize private sector capacity that is currently focused more on mitigation to do additional wetland acres in conjunction with (beyond and above) mitigation
- Connect wetland restoration outreach to flood-based management efforts for increasing willingness to implement
- Change reporting mechanism to include wetland acres created as part of stream restorations but to not assign TMDL credits since that is already in the stream restoration riparian calculation
- Practitioner Training - on-the-ground with live farmers to really see how the discussion can go to encourage wetland restoration - and benefits to producer
- Provide producer more specific and evidence-based examples within their respective communities of how wetlands are of value to their operations
- A simplified process for homeowners/businesses to restore wetland habitat on their waterfront property, opening access to wetland restoration on private land. Homeowners/businesses can be overwhelmed by the permitting process.
- State Fair/Displays
- Buy in and involvement from private landowners to increase not destroy and fill in wetlands
- We need to move folks away from just thinking the LARGE non-tidal wetlands are the goal - and move folks towards knowing that the impactful locations could be smaller areas...
- Encourage agencies at all levels to incentivize wetland restoration in all project types (voluntary/TMDL, mitigation, etc.), and include funding for post-construction monitoring
- More partnerships
- Highlight the wildlife that landowners can expect to see in their newly restored wetlands

**QUESTION 4:** *What are the ideas for tidal wetlands that can put us on schedule to move us closer to our Outcome?*

- Incorporate flexibility into granting requirements to allow for project adjustments during permitting process
- Need expertise
- Understanding what landowners want - meet them where they are - give them something they need/want. Living shorelines are an example of that.
- Develop (and fund) uniform monitoring/adaptive management protocols that are used in each project and will inform future restoration efforts
- Generate a list of tidal projects and practitioners occurring in Chesapeake Bay to improve partnership building and identifying expertise. Example: LA site: LA project list: https://lacoast.gov/new/projects/list.aspx
- Overcome regulatory hurdles, many salt marsh restoration techniques are innovative, or haven't been monitored long term and this makes permitting a bit slower. Pool research to inform regulators?
- Develop objective criteria for designating a site as "degraded" and thus warranting intervention of a certain nature
- Make goose (overpopulated Resident Canada Geese) management easier to happen. It took a long time to happen in DC! It is happening now with great outcomes for the marshes.
- Establish vulnerability/resilience metrics to assist with targeting tidal wetland restoration projects and informing strategies to promote longevity of the restored wetland
- Prioritize sites for restoration. This includes a clear need for TLP or other remediation. Not all marshes are drowning, so focus on those that are. Work collaboratively with agencies to identify source of sediment and synch timelines.
- Coordinate restoration plans within regions or tributaries so that smaller scale projects can be bundled
- Promote BUILD site to identify possible restoration locations for the state of MD https://gisapps.dnr.state.md.us/coastalatlas/WAB2/
- Tap into and participated in existing efforts in Virginia, e.g., Elizabeth River Project (NGO), York River Roundtable, NCBO Middle Peninsula Habitat Focus Area (HFA)
- Prioritization and scale - living shorelines - while each parcel is important to the collective, and the individual landowner, it is the larger parcels (public lands and agricultural) that will likely get us to goal
- To meet the overall goal, do we need to spend less time targeting, and realize that we need to take every opportunity that presents itself for tidal wetlands?
- Emphasize local utility of wetlands as a natural resource asset: **1**. Fishponds **2**. Flood control **3**. Water treatment plant usage **4**. Pre-primary treatment for drinking water **5**. Gray water recovery
- Identify priority restoration projects that maximize multiple benefits. Could assist with being more competitive for National Federal grants
- Shoreline management BMP reporting for WIP - living shorelines - default method is shoreline length only, need to emphasize/promote use of site-specific methods which include acres of planted marsh
- Design Living Shorelines to take advantage of all habitat types including low marsh; so often forgotten during design. High marsh is great (SALS) but we need low marsh for fish and to meet wetland goals
- Develop plan or approaches for addressing shallow water use conflicts. E.g., Living shoreline or tidal wetland supplanting SAV. Also, more science to show positive/neg impacts on SAV.

- Accept that living shorelines are going to be more expensive per unit (whatever you are measuring) because they meet another goal too: How do we not be scared by that? Pro-rate them somehow?
- Integrate Living Shorelines to encompass marsh/SAV/freshwater mussel beds (where suitable) habitats like folks in Delaware have started to plan
- Prioritize funding for living shorelines and marshes, and do not limit these by prohibiting structural placement (this is often needed to protect from further shoreline erosion)

**QUESTION 5:** *What are the programs that have the greatest amount of funding we can access for non-tidal and tidal wetlands? Why are some programs being under-described?*

- NFWF programs have had wetland goals for years, but relatively thin demand for wetland projects. This funding is exceedingly flexible, can absolutely support soft-money expansion of capacity, and represents a critical piece to unlock more traditional federal and state programs
- NFWF coastal resilience fund
- NFWF Chesapeake Bay small watershed grant
- NFWF...all our NFWF INSRG projects generally have a wetlands element to it.
- EPA's Clean Water State Revolving Fund (CWSRF) has historically been used mostly for wastewater and regulated stormwater infrastructure, but wetland projects have long been eligible
- Dedicated public and non-profit revenue streams can open up the significant financing capacity available in the CWSRF's for wetland restoration
- Clean Water Act Mitigation bank/In-lieu Fee programs
- FEMA Grant programs
- No local match for BIL funds
- USDA/NRCS Grant Programs
- America the Beautiful funding - seemed like too quick turnaround
- Would NAWCA (North American Wetland Conservation Act) grants be applicable here?
- USACE Funding CAP 204; 206;1135; Specifically authorized projects, Estuary Restoration Act, Section 1122 Beneficial Use
- Might be a stretch... there have been a few wetlands/wetlands adjacent projects funded via Dept. of Defense's Office of Local Defense Community Cooperation
- Sentinel Landscapes (DOD, USDA, USFWS, etc.) allow matching btw federal agencies to do conservation on private lands (if there's a benefit to DOD). 1 in MD, 1 pending in VA
- ARPA dollars available to states; ARPA dollars available to municipalities
- https://www.nab.usace.army.mil/Missions/Civil-Works/Chesapeake-Bay-Comprehensive-Plan/
- Dept. of Defense Readiness & Environmental Protection Integration Program manages a "REPI Challenge" annual RFP, they've also recently partnered with NFWF
- In VA, private landowners need to reach out if they have assistance and whenever they do it seems like there aren't many favorable incentive options
- An indirect source of funding are developers. Some developers pursue approaches where wetland creation/restoration inherently become a part of their development. Especially the ones that understand the benefits.
- It depends on the project. Developing a priority list and periodically review the priority projects and evaluate available funding/programs to fund.
- Funding just for planning phase (to get to shovel ready) would be very helpful
- Some funding sources want "shovel ready" projects but there is lack of funding and capacity for design/engineering to get plans to that point

- Few programs pay for a project entirely, so fundraising for match causes delays
- Economic benefit is not made obvious enough to encourage a landowner to subscribe
- NRCS funding seems to be available for wetlands, but it takes years to get through contracting, let alone project implementation. Landowners aren't that patient.
- Lack of technical expertise by program managers
- Perception that working in/around wetlands often gets people in trouble or is not allowed, lack of knowledge/availability of where to find wetland expertise or assistance
- Education is needed for municipal staff and adjacent landowners of benefits of wetlands, so they welcome instead of fight (re. mosquitos, fear, etc.)
- Reputation that grant funding takes too much energy to use - across the board
- Wetlands are occasionally not included or subscribed because if a rare species is found, that limits other conservation work that is possible
- NRCS's ACEP-WRE has plenty of funding. Haven't hit a ceiling yet.
- NRCS also offers RCPP which allows for wetland funding, through partner led projects. Partner match is required but can be met through EPA or other matching funds.
- CRP/CREP appear to have unlimited funding for wetland restorations
- Sometimes CREP projects in Maryland get stalled in the engineering design process and are not always prioritized
- ACEP-WRE and CREP seem to be the programs leading to the greatest amount of wetland restoration. It seems the technical capacity, or perhaps the coordination of partners, is the limiting factor.
- Explore Federal Infrastructure Funding Opportunities
- Restoration funding is not the limitation for nontidal projects on private lands
- A DoD Sentinel Landscape designation allows DoD to match REPI funds with funds from other federal agencies (USFWS, USDA, USFS, etc.) to conduct conservation on private lands if there is a benefit to DoD. There is currently only one designated SL in the watershed - the Middle Chesapeake Sentinel Landscape in MD and they have done great work to preserve wetlands and protect migration corridors. There is another large SL proposed in VA, but it has not been formally designated yet.
- There is currently only one designated SL in the watershed - the Middle Chesapeake Sentinel Landscape in MD and they have done great work to preserve wetlands and protect migration corridors.
- There is another large SL proposed in VA, but it has not been formally designated yet
- For DoD, funding sources include Legacy Resource Management Program, Military Installation Sustainability Program, Readiness and Environmental Protection and Integration program, Sentinel Landscape Partnership program and the non-DoD Building Resilient Infrastructure and Communities Grants
- Multiple benefits are not well documented or accounted for because of programmatic silos, i.e., habitat focused, water quality focused, resiliency focused, etc.
- In Maryland, the Chesapeake Trust Fund has a lot funding available for wetland projects
- Maryland Chesapeake & Atlantic Coastal Bays Trust Fund
- Our outreach efforts in Maryland have shown that there's a lot of untapped interest, particularly with landowners (in contrast to farmers). Dedicated outreach, and biologists and civil engineering techs on the ground are necessary to address the demand.
- Lack of Technical capacity to deliver the programs
- Obstacle: capacity for getting projects to "shovel ready" stage (this can be a lengthy process, as we heard in the presentations this morning)

- In NY it is a matter of being stretched too thin with limited staff. It would be nice to increase our WRE workload but it's a balancing act with everything else we have on our plate.
- Reach out to retired wetland professionals to develop a "wetland restoration corps"? Contact them through professional organizations like the Virginia Association of Wetland Professionals?
- Some programs are undersubscribed as they are extremely difficult to work with i.e., assist landowner thru the process
- Identify the number of team members and roles for teams working wetlands
- Novel approaches to wetland restoration, like legacy sediment removal, are not well understood despite their tremendous potential for multiple benefits. Conventional approaches dominate
- Outreach is most effective, in person, one on one - developing relationships
- Nonpoint Source Program (Section 319) funds
- NFWF Coastal Resilience
- US FWS National Coastal Wetlands Conservation
- Has anyone had luck with FEMA funding?

**QUESTION 6:** *What governance changes need to be made at the local, state, or federal level to maximize attainment of our Outcome?*

- Baywide, criteria driven project sighting is needed
- Establish commitments from state/fed/NGO practitioners that can be captured under one goal
- Standardized methods for defining success
- Establish an accounting system to measure the progress consistently
- Standardized terms for what restoration success is
- Establish interagency working groups to plan projects and track progress collectively
- Ability to project costs, schedules, materials, expertise needed to complete projects
- Costs can vary, maybe a portfolio of case studies that illustrate costs across a range of project types, locations, and scale
- Consistent alignment of climate, water quality and habitat goals across state incentives programs to maximize opportunities for wetland restoration
- Reduce implicit bias related to "wetlands versus forests"
- More coordination across agencies and programs - but this must be focused in specific geographies - integrated project planning in focus areas/site based
- CBP reporting and verification policies are a hindrance to accounting for wetlands restored and re-established
- Need to make habitat more important than water quality, per se. Spending too much on WWTPs with no habitat benefits. "Water quality" has become too important.
- Further incentivize (priority ranking, etc.) wetland restoration / re-establishment as part of holistic farm-scale or other larger projects
- Flooding is increasingly a big problem - prioritize wetland creation to address
- For the agriculture community: emphasize connection between buffer/wetland restoration and edge-of-field and edge-of-stream practices designed to enhance soil and watershed health as well as enhance climate resiliency
- Consider measuring Living Shorelines as both linear feet of shoreline and total acreage of wetlands created, as many designs/implementations include portions of both
- Speak to direct benefits that practices can provide to the landowner (e.g., bird/pollinator habitat, soil health, water quality)

- More education and access to innovative financing now allowed through State Revolving Loan funds to support development and prioritization of blue infrastructure
- Better communication tools for general practitioners that are not experts in wetlands
- One of the initial graphs said we still had a declining trend of wetlands - how is that possible with all their legal protections?? Address loopholes.
- Have capacity to speak to how a design might fit on a landowner's property
- Capacity support for grant writing, grant management, BMP documentation, etc... that takes the burden off local governments, farmers, non-profits...
- Capacity building for non-profits who can take the lead in working with landowners and identifying projects to achieve watershed/area wide scale benefits
- Understand how wetlands are currently being captured/credited in the model (CAST) for each sector
- Increase state level capacity for permitting for voluntary and regulatory implementation
- Dedicated teams of people with this as their only focus
- Training for employees in outreach, writing proposals, etc. so that the burden can be spread out
- High Quality projects cost a substantial amount of money. Finite resources do not allow for many of these projects.
- Multi-program crediting and ensure permittees / stakeholders understand what specifically they can get toward their regulatory requirements (e.g., MS4)
- Evaluate if gains made through mitigation banks/projects could be credited towards CBP goals
- Project solicitation and funding - Explicitly request project partners to identify and propose wetland projects and provide incentives to fund - provide bonus points for these projects during funding review and/or set-aside a certain amount of funding for wetland projects
- COLA increases at the state level, combined with Conowingo and CC set asides are making funding tighter year over year within federal grants
- Allow for reporting of greater than 1:1 wetland restoration toward Chesapeake Bay Watershed crediting
- Increase buffer requirements on proposed development to slow/combat wetland loss
- Policies that allow for stacking of quantified and verified environmental outcomes that can be purchased/traded separately but simultaneously from a single project
- Review regulatory hurdles and adopt new processes to permit habitat restoration projects - often permitting uses the lens of development impacts and is unable to look at tradeoffs and/or habitat gains
- MEB boundaries linked to significant federal funding (specifically IIJA) are very limited in Virginia. Could achieve more implementation across all BMP types
- Land use planning strategies aligned at state and local scales that encourages and facilitates wetland restoration in the context of saltwater intrusion and ongoing sea level rise → needs to focus on landowner compensation

## APPENDIX F: Day 2 Jamboard Responses

**QUESTION 1:** *How do we incorporate these new approaches/ideas into our processes and efforts for non-tidal wetlands? (e.g., how are you going to increase capacity? What types of funding have the greatest influence in your state?)*

**DELAWARE:**

- Build capacity within the CWSRF that incorporates wetland restoration and enhancement additions to traditional loan projects
- Look at leveraging/coordinating NRCS and State funding sources
- Use newly formed Delaware Wetland Restoration Workgroup to leverage funding, coordinate existing staff capacity, identify additional capacity needs, and increase projects and efficiencies
- Have restoration-specific outreach materials at events where DE Wetlands staff, conservation staff, will be present (State Fair, Water Family Fest, Blackbird Fall Fest)
- Increase staff capacity, leverage staff for outreach
- Increase or build on other efforts: Delmarva Restoration Team, DRCN, Envision the Choptank, etc.

**DISTRICT OF COLUMBIA:**

- Most restoration in Anacostia
- Utilizing experts and technical partners for their knowledge
- 2 Factors pushing wetland work ahead of streambank and shoreline: Sea level rise and sediment remediation work in Anacostia
- Established a restoration plan for the tidal corridor of the Anacostia additional opportunities from federal agencies
- Change in WIP focus since being able to meet jurisdiction WIP
- NFWF and Chesapeake Bay Trust are prime funding opportunities. Looking at USFWS and other federal funds for funding.
- Funding for maintenance
- Kingdom Lake future project
- Was able to address the goose population management for wetland projects to progress work
- Having to get public and partner buy-in related to living shoreline maintenance and getting federal buy-in related to establishment on federal lands
- Challenge: 7 miles of Anacostia is armored
- Building partnership to address apprehension of altering armoring (historic resource)

**MARYLAND:**

- Implementing Maryland's Conservation Finance Act - opens state revolving loan funds for green infrastructure projects/leverages private sector funding/requires quantification of ecosystem services. Send a signal through this leg and funding for more wetland projects
- Develop a wetland finance plan for tidal and inland wetlands, considering marketable ecosystem services and potentially combing funding with finance
- Modify/update local agriculture conservation plans to allow wetland restoration (MALPF has started this recently)
- Increase collaboration with DNR and MDE to implement green infrastructure funding and leverage funding. Standardizing outcomes/ reporting/ quantification.
- How to leverage state and private dollars - what new opportunities are there to use Clean Water Finance Act funding and/or the new opportunities available through Clean Water Commerce.

- Provide more funding for shoreline projects, including those that have structural components mixed in with marsh/living shoreline components (make funding more flexible)
- Of tremendous influence is the Department of Transportation, including MPA. Wetlands are not their primary mission, but they have a lot of funding there and we need to hear how they work wetlands into their projects.
- Support long-term capacity building, maybe through a cost-share program (support 1/2 of the cost of a position if an organization supports the other 1/2).
- Networks of scientists/land managers (e.g., CBSSC) can provide technical expertise to help increase capacity
- What is meant by capacity? Increase skills/knowledge of existing staff, add new/permanent staff, create widgets like a centralized grants application... something else?
- We need greater interest in wetland restoration at the local County levels... RFP focus areas drive location (urban, rural), and type (stream type, wetlands included or not?) of restoration done.
- Collective Impact - support the development of collaborative networks in geographic focus areas to work with landowners, generate projects, apply for grants, manage paperwork
- Capacity building/EJ: DNR and CBT are partnering on a Community Based Organization Capacity Building Initiative to help historically under-engaged community organizations participate in WQ and Resilience project design and grant funding proposal development.
- Develop a strategy to assist partners in utilizing state funds for match in the development of grant proposals
- Field liaisons that can help smaller entities/private landowners navigate funding
- Tracking success stories and making project objectives more accessible could help agency staff more readily ID better designs or at least provide more directed responses to applicants. If this is being done already - could that tracking be made more accessible by other agencies?
- Are there ways to incorporate a more visible tracking of projects in the pipeline? 'Visible' = to the public. This could help with site prioritization. I think someone mentioned earlier today about a GIS-database that could be hosted by (who I don't know).
- Increase education and outreach regarding wetlands - many residents/communities think wetlands are mosquito pools and don't want them
- Develop a landowner targeting plan for distressed properties, agricultural fields experiencing saltwater intrusion, ecologically important areas etc.
- How do we move from an opportunistic model to a targeted approach? Understand what on-the-ground capacity, outreach and planning is needed for this transition.
- Identify areas that are conservation/restoration priorities for multiple partners/stakeholders and align efforts
- Identify what decision-support tools and frameworks are needed by conservation partners

**NEW YORK:**

- Identify outreach needs, and prioritize landowners based on recently developed potential sites databases
- Utilize new grant funding that was discussed today
- Increase collaboration between agencies
- We have been very successful securing NFWF funds, provide a lot of flexibility to support our regional delivery mechanism. We are always looking for new funding opportunities.
- Look into the potential to partner with other organizations
- Identify priority restoration sites and secure funding for acquisition
- WREP funds also have potential as well as RCPP

- ACEP WRE has the potential to have a more significant role

**PENNSYLVANIA:**

- Project ID option: Compare hazard mitigation plan flood mitigation needs to hydric soils/hi res land cover maps to identify project opportunity areas; target 100-acre projects or greater
- Allow multi-program benefit accounting which will allow project scale to increase. Stream and wetland benefit accounting. Most wetlands were lost in PA due to legacy sediment occurrences.
- Facilitate larger projects that have co-benefits (restored floodplains with wetlands reestablished), co-benefits including flood attenuation, etc.
- Utilize state permitting resources to streamline permitting reviews for projects
- Complete development of the wetland loss watershed impairment rating. A pilot was initiated in the Juniata River basin but not completed.
- Identify that legacy sediment is a historical societal pollutant load and not a land use sector load, reduces friction between land uses and allows it to apply across all sectors. The pollutant load could then be identified as different category for addressing and provide multi-benefit accounting.
- Fund a wetland program complement at PADEP!
- Determine project and staffing budget needs to implement the target # of projects
- Determine technical workload needs to implement the targeted number of projects
- PA DEP could use a wetland restoration technical workgroup similar to DE which we learned about this past summer at MAWWG, and we will be looking to develop this effort.
- Use existing/new technical groups and/or watershed manager group to provide technical training on recognizing historic alterations and causes of wetland losses and approaches to restoring them. Too often projects are not recognizing opportunities and leave benefits on the table.
- Many conservation organizations are not familiar with wetland restoration. Providing outreach to organizations regarding priority restoration locations, techniques, how to identify restoration opportunities when working on farms, funding priorities, etc. would be very helpful.

**VIRGINIA:**

- The approval of the proposed Virginia Security Corridors Sentinel Landscape designation will present the opportunity to leverage various sources of military and other federal funding sources
- Is USDA and USFS engaged in this Sentinel Landscape initiative?
- See proposed Sentinel Landscape Partnership framework
- That is for cooperative planning. Also for implementation?
- Need to further engage federal agencies and wetlands that may be implemented on federal land in VA
- Designated Sentinel Landscapes come w/funding that can be used to hire coordinator(s) for a certain amount of time, could help with capacity
- Re: DoD, there's a new state-level Virginia Military Community Infrastructure Grant Program & Fund, might be applicable here?
- Are there opportunities to work with emergency management agencies to target wetland restoration in areas of frequent flooding in association with retreat efforts?
- Nature based solutions in Coastal Resilience Master Plan and Flood Protection Master Plan
- NOAA selected the Middle Peninsula as a Habitat Focus Area - this designation could bring resources to the area through NOAA grants
- York River Roundtable Habitat Committee developing tidal wetlands plan for watershed to provide some prioritization to wetlands restoration/conservation projects/sites

- Capacity issues for state & partners
- Need a method to share information across agencies regarding landowner projects and how to engage landowners
- Seem to be more roadblocks to this particular type of work - land development value, permitting, cropland use all seem to be hold ups for landowners
- New funding through IIJA has huge potential for all types of BMP implementation (including wetlands) but is extremely limited geographically in Virginia
- Engage the farmers as champions
- Engagement w/VA PDCs?
- For tidal wetlands associated with living shorelines: good collaboration and coordination between partners on projects - see JRA's Living Shorelines Collaborative and DCR-SEAS NFWF INSR project
- Demonstration projects
- Engagement w/VA PDCs?
- Middle Peninsula PDC climate resilience initiatives

**QUESTION 2:** *How do we address these ideas/approaches in the development of an action plan?*

**DELAWARE:**

- First, must increase capacity - badly needed
- Need to understand how all the funding sources - and new funding - interact and can be used efficiently
- Determine how to connect wetland projects with flood plain management and restoration. Coordinate with flood funding sources such as flood hazard mitigation.
- Is there an approach and organized structure (and assistance) to help us decide what to do to help meet our wetland goal? To help break down silos...
- Organized structure that sustains progress, guides efforts, and keeps momentum over time and through staff changes
- Have a point-person who is knowledgeable about the requirements and eligibilities for all the different funding sources?
- Revisit and update the comprehensive list of funding, landowner incentive programs
- Make sure the action plan address how to deal with competing influences for lands (ag economy and production; development pressures)
- Consider the economic benefits of going out and acquiring large parcels to bring about significant wetlands restoration and enhancement projects -- especially since it is becoming very difficult to convince landowners to enter easement programs or even offer them enough $$ for them to consider it.

**DISTRICT OF COLUMBIA:**

- Establishing a medium/ long term maintenance plan/ budget
- Shorter term grants are meeting some of the needs currently, but a longer-term approach (longer term funding) needed
- Evaluating reuse projects as part of future work
- Interested in map of sea level rise to plan for maintenance
- Corridor plan will serve as the outline/foundation for the development of the action plan as it will address multiple areas and future projects
- Continue to monitor goose exclusion for wetlands

- Phragmites control is a major maintenance concern

**MARYLAND:**

- Consider a federal, NGO, or University coordinator to span jurisdictions
- Identify what do we want increased hires to do? How will they be trained, what are the priorities for their work, who do they need to work with to be effective in whatever the goal(s) is/are for the new workforce.
- More collaborative effort between SRF and Trust Fund - MDE/DNR work via Conservation Finance Act... options could include ranking SRF funds or providing opportunities for DNR and other agencies for more direct funding/financing management
- Align wetland restoration plans with striped bass habitat protection plans to expand juvenile fish habitat
- Targeted Resilience Area Initiative will work in lower Pocomoke area and in Antietam Creek/Hagerstown area. Will generate pipeline of projects and engage other agencies/orgs in a collaborative network approach enhance climate change resiliency. Should incorporate both tidal and non-tidal wetland efforts.
- Tie in tidal and non-tidal wetland goals with the State's Climate Change Commission workplans/new MD Dept. of Emergency Managements Office of Resiliency/Conservation Finance Act... create the demand for wetlands!
- DNR and MDE wetland outreach campaigns via social media platforms of what wetlands are and their functions/services/benefits
- Regional robust mapping and data layers to identify tidal wetlands, where they can migrate, and identify and map the criteria needed to rank wetland value for restoration and migration
- Separate the tidal and non-tidal discussion as they seem to have fairly different requirements
- Develop strategies for: **1)** generating DEMAND for wetland projects and **2)** generating SUPPLY, or a pipeline, of fundable wetland projects
- Section for coordination/ streamlining of getting projects on the ground
- Section for coordination of funding to leverage federal dollars
- Develop a Wetland Finance Implementation Tool based on model of MDE's Forest Finance Implementation Tool
- Include the development of a finance plan for tidal and non-tidal wetlands

**NEW YORK:**

- Expand capacity
- Continue to secure funds to support staffing, planning, design, implementation and administration of grant funds
- Expand virtual resources, and access to those resources for partners to use
- Develop NY CBP Wetland Action Team to meet and brainstorm
- Ongoing dialogue between groups and collaborating on increasing capacity, where possible
- Flexible program funding
- Highlight co-benefits: habitat restoration, flood resiliency, water quality
- With the new Farm Bill in the offing, provide comments that might expand options within the Farm Bill to address conservation issues

**PENNSYLVANIA:**

- Enhanced data tracking so that wetlands implementation gets reported
- Team Leads focused on Targeting, Outreach/Education, Implementation, and Funding are critical and would be a catalyst for increased momentum

- Explore how to leverage funding and efforts of key federal partners such as NRCS and Partners for Fish & Wildlife
- Enhanced remote sensing of wetlands that are either built or formed
- Increase capacity by training grantees/NGOs re: wetland science - types of wetlands, role of wetlands in stream systems, how wetlands and buffers work together, how to recognize wetland restoration opportunities on farms (in buffers, tiling, filling), priority restoration locations, funding opportunities, how wetland restoration is credited in CAST, etc.
- Evaluate the need for targeted wetland capacity at many levels including at key agencies
- Increase public fund project period enabling capacity to be hired for a longer timeframe
- Legislative support for state wetlands program staff and project funding
- Short-term need: wetland project siting optimization tool (co-benefits, legacy sediment impact, flood mitigation)
- What about Watershed Resource Registry (WRR) as a tool?
- Promote higher crediting for evidence-based approaches that address the underlying causes of degradation
- Allow crediting to account for integrated riverine corridor restoration projects that include in-stream, floodplain, and riverine wetland conservation
- Allow multi-program benefit accounting which will allow project scale to increase. Stream and wetland benefit accounting. Most wetlands were lost in PA due to legacy sediment occurrences.
- Need collaborative arenas/mechanisms where individual interests are "checked at the door" to allow fruitful discussions amongst different interests (local, state, and bay-wide level)
- Exploration of how PennVest coupled with private and public dollars can be used to leverage and align dollars in the wetland space

**VIRGINIA:**

- Develop a wetland restoration targeting tool VIMS
- Focus on public lands?
- VACS cost-share for wetlands creation
- Allow IIJA funding from CBPO to states to be used for wetland restoration anywhere (not just in most effective basins geography) and to build staff capacity to assist landowners
- State coordination
- Incentivize developers by making wetland inclusive urban BMPs more desirable to include in their plans
- For tidal wetlands associated with living shorelines, VCAP has been in important financial incentive. for urbanized areas, need to try to expand VCAP into non-SWCD localities.
- Can incentives be connected with flood mitigation? E.g., Identify wetland projects with Fight the Flood program and provide an incentive for flood mitigation.
- Establish the annualized value of public benefit from an acre of wetland. That becomes the basis for rental payment
- Communicate benefits of wildlife and hunting opportunities
- NRCS serve a state coordination for wetlands projects
- GIT (or other funding) Farmer survey on what they want to change landcover to wetlands
- Once a VA Sentinel Landscape coordinator(s) is in place, create a point of contact/system for working with landowners or something to that effect

## APPENDIX G: GOOGLE SURVEY RESPONSES

During both days of the workshop, attendees who were interested in participating in continued wetlands discussions moving forward were asked to complete a survey. Twenty-eight personnel responded to the survey. The following tables contain the contact information and topics of interest in which these personnel can provide assistance.

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**OTHER:**

| GENERAL TOPIC OF INTEREST | NAME | EMAIL | AFFILIATION | AGENCY/PLACE OF WORK | GROUPS INTERESTED IN JOINING |
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| | Kristen Saacke Blunk | kristen@headwaters-llc.org | NFWF Contractor | Headwaters LLC | Coordination, Collaborations |
| | Rese Cloyd | rese.cloyd@dc.gov | District of Columbia | DC Department of Energy and Environment | Public & Community engagement |

| | | | | | |
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| | Megan Fitzgerald | fitzgerald.megan@epa.gov | Federal | EPA - R3 | Capacity building (Incl. cross agency collaboration) |
| | Zack Greenberg | zgreenberg@pewtrusts.org | NGO | The Pew Charitable Trusts | Convening, collaboration and outreach |
| **DATA COLLECTION & EVALUATION** | Katheryn Barnhart | Barnhart.Katheryn@epa.gov | Federal | EPA CBP | Establishing metrics to track progress |
| | Julie Reichert-Nguyen | julie.reichert-nguyen@noaa.gov | Federal | NOAA Chesapeake Bay Office | Targeting and restoration success criteria |
| | Aaron Wendt | aaron.wendt@dcr.virginia.gov | Virginia | Virginia Department of Conservation and Recreation - Shoreline Erosion Advisory Service | Monitoring & Assessment |
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